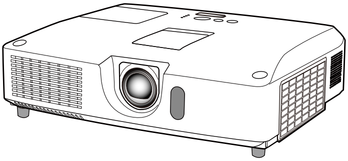
Projector

CP-X4021N/CP-X5021N/ CP-WX4021N

User's Manual (detailed) Operating Guide



Thank you for purchasing this projector.

⚠**WARNING** ►Before using this product, please read all manuals for this product. Be sure to read **User's Manual - Safety Guide** first. After reading them, store them in a safe place for future reference.

About this manual

Various symbols are used in this manual. The meanings of these symbols are described below.

⚠**WARNING**	This symbol indicates information that, if ignored, could possibly result in personal injury or even death due to incorrect handling.
⚠**CAUTION**	This symbol indicates information that, if ignored, could possibly result in personal injury or physical damage due to incorrect handling.
NOTICE	This entry notices of fear of causing trouble.
📖	Please refer to the pages written following this symbol.

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HITACHI
Inspire the Next

Read this Safety Guide first.

Projector

User's Manual - Safety Guide

Thank you for purchasing this projector.

⚠ **WARNING • Before using, read these user's manuals of this projector to ensure correct usage through understanding. After reading, store them in a safe place for future reference. Incorrect handling of this product could possibly result in personal injury or physical damage. The manufacturer assumes no responsibility for any damage caused by mishandling that is beyond normal usage defined in these manuals of this projector.**

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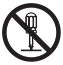
About The Symbols

Various symbols are used in this manual, the user's manual and on the product itself to ensure correct usage, to prevent danger to the user and others, and to prevent property damage. The meanings of these symbols are described below. It is important that you read these descriptions thoroughly and fully understand the contents.

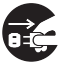
⚠ **WARNING**	This symbol indicates information that, if ignored, could possibly result in personal injury or even death due to incorrect handling.
⚠ **CAUTION**	This symbol indicates information that, if ignored, could result possibly in personal injury or physical damage due to incorrect handling.

Typical Symbols

⚠ This symbol indicates an additional warning (including cautions). An illustration is provided to clarify the contents.



This symbol indicates a prohibited action. The contents will be clearly indicated in an illustration or nearby (the symbol to the left indicates that disassembly is prohibited).



This symbol indicates a compulsory action. The contents will be clearly indicated in an illustration or nearby (the symbol to the left indicates that the power plug should be disconnected from the power outlet).

Safety Precautions

⚠ WARNING

Never use the projector if a problem should occur.

Abnormal operations such as smoke, strange odor, no image, no sound, excessive sound, damaged casing or elements or cables, penetration of liquids or foreign matter, etc. can cause a fire or electrical shock.
In such case, immediately turn off the power switch and then disconnect the power plug from the power outlet. After making sure that the smoke or odor has stopped, contact your dealer. Never attempt to make repairs yourself because this could be dangerous.

- The power outlet should be close to the projector and easily accessible.

Disconnect the plug from the power outlet.

Use special caution for children and pets.

Incorrect handling could result in fire, electrical shock, injury, burn or vision problem.
Use special caution in households where children and pets are present.

Do not insert liquids or foreign object.

Penetration of liquids or foreign objects could result in fire or electrical shock.
Use special caution in households where children are present.
If liquids or foreign object should enter the projector, immediately turn off the power switch, disconnect the power plug from the power outlet and contact your dealer.

- Do not place the projector near water (ex. a bathroom, a beach, etc.).
- Do not expose the projector to rain or moisture. Do not place the projector outdoors.
- Do not place flower vases, pots, cups, cosmetics, liquids such as water, etc on or around the projector.
- Do not place metals, combustibles, etc on or around the projector.
- To avoid penetration of foreign objects, do not put the projector into a case or bag together with any thing except the accessories of the projector, signal cables and connectors.

Never disassemble and modify.

The projector contains high voltage components. Modification and/or disassembly of the projector or accessories could result in fire or electrical shock.

- Never open the cabinet.
- Ask your dealer to repair and clean insider.

Do not disassemble.

Do not give the projector any shock or impact.

If the projector should be shocked and/or broken, it could result in an injury, and continued use could result in fire or electrical shock.
If the projector is shocked, immediately turn off the power switch, disconnect the power plug from the power outlet and contact your dealer.

Do not place the projector on an unstable surface.

If the projector should be dropped and/or broken, it could result in an injury, and continued use could result in fire or electrical shock.

- Do not place the projector on an unstable, slant or vibrant surface such as a wobbly or inclined stand.
- Use the caster brakes placing the projector on a stand with casters.
- Do not place the projector in the side up position, the lens up position or the lens down position.
- In the case of a ceiling installation or the like, contact your dealer before installation.

Safety Precautions (continued)

⚠ WARNING

Be cautious of High temperatures of the projector.
High temperatures are generated when the lamp is lit. It could result in fire or burn. Use special caution in households where children are present.
Do not touch about the lens, air fans and ventilation openings during use or immediately after use, to prevent a burn. Take care of ventilation.

- Keep a space of 30 cm or more between the sides and other objects such as walls.
- Do not place the projector on a metallic table or anything weak in heat.
- Do not place anything about the lens, air fans and ventilation openings of the projector.
- Never block the air fan and ventilation openings.
- Do not cover the projector with a tablecloth, etc.
- Do not place the projector on a carpet or bedding.

Never look through the lens or openings when the lamp is on.
The powerful light could adversely affect vision.
Use special caution in households where children are present.

Use only the correct power cord and the correct power outlet.
Incorrect power supply could result in fire or electrical shock.

- Use only the correct power outlet depending on the indication on the projector and the safety standard.
- The enclosed power cord must be used depending on the power outlet to be used.

Be cautious of the power cord connection.
Incorrect connection of the power cord could result in fire or electrical shock.

- Do not touch the power cord with a wet hand.
- Check that the connecting portion of the power cord is clean (with no dust), before using. Use a soft and dry cloth to clean the power plug.
- Insert the power plug into a power outlet firmly. Avoid using a loose, unsound outlet or contact failure.

Be sure to connect with ground wire.
Connect the ground terminal of AC inlet of this unit with the ground terminal provided at the building using the correct power cord; otherwise, fire or electric shock can result.

- Don’t take the core of power cord away.

Surely connect
the ground wire.

Safety Precautions (continued)

⚠ WARNING

Be careful in handling the light source lamp.
The projector uses a high-pressure mercury glass lamp made of glass. The lamp can break with a loud bang, or burn out. When the bulb bursts, it is possible for shards of glass to fly into the lamp housing, and for gas containing mercury to escape from the projector's vent holes.

Please carefully read the section "Lamp".

Be careful in handling the power cord and external connection cables.
If you keep using a damaged the power cord or cables, it can cause a fire or electrical shock. Do not apply too much heat, pressure or tension to the power cord and cables.
If the power cord or cables is damaged (exposed or broken core wires, etc.), contact your dealer.

- Do not place the projector or heavy objects on the power cord and cables. Also, do not place a spread, cover, etc, over them because this could result in the inadvertent placing of heavy objects on the concealed power cord or cables.
- Do not pull the power cord and cables. When connecting and disconnecting the power cord or cables, do it with your hand holding the plug or connector.
- Do not place the cord near the heater.
- Avoid bending the power cord sharply.
- Do not attempt to work on the power cord.

Be careful in handling the battery of the remote control.
Incorrect handling of the battery could result in fire or personal injury. The battery may explode if not handled properly.

- Keep the battery away from children and pets. If swallowed consult a physician immediately for emergency treatment.
- Do not allow the battery in a fire or water.
- Avoid fire or high-temperature environment.
- Do not hold the battery with the metallic tweezers.
- Keep the battery in a dark, cool and dry play.
- Do not short circuit the battery.
- Do not recharge, disassemble or solder the battery.
- Do not give the battery a physical impact.
- Use only the battery specified in the other manual of this projector.
- Make sure the plus and minus terminals are correctly aligned when loading the battery.
- If you observe a leakage of the battery, wipe out the flower and then replace the battery. If the flower adheres your body or clothes, rinse well with water.
- Obey the local laws on disposing the battery.

Safety Precautions (continued)

⚠ CAUTION

Be careful in moving the projector.

Neglect could result in an injury or damage.

- Do not move the projector during use. Before moving, disconnect the power cord and all external connections, and close the slide lens door or attach the lens cap.
- Avoid any impact or shock to the projector.
- Do not drag the projector.
- For moving the projector, use the enclosed case or bag if provided.

Do not put anything on top of the projector.

Placing anything on the projector could result in loss of balance or falling, and cause an injury or damage. Use special caution in households where children are present.

Do not attach anything other than specified things to the projector.

Neglect could result in an injury or damage.

- Some projector has a screw thread in a lens part. Do not attach anything other than specified options (such as conversion lens) to the screw thread.

Avoid a smoky, humid or dusty place.

Placing the projector in a smoke, a highly humid, dusty place, oily soot or corrosive gas could result in fire or electrical shock.

- Do not place the projector near a smoky, humid or dusty place (ex. a smoking space, a kitchen, a beach, etc.). Do not place the projector outdoors.
- Do not use a humidifier near the projector.

Take care of the air filter to normal ventilate.

The air filter should be cleaned periodically. If the air filter becomes clogged by dust or the like, internal temperature rises and could cause malfunction. The projector may display the message such as “CHECK THE AIR FLOW” or turn off the projector, to prevent the internal heat level rising.

- When the indicators or a message prompts you to clean the air filter, clean the air filter as soon as possible.
- If the soiling will not come off the air filter, or it becomes damaged, replace the air filter.
- Use the air filter of the specified type only. Please order the air filter specified in the other manual of this projector to your dealer.
- When you replace the lamp, replace also the air filter. The air filter may be attached when you buy a replacement lamp for this projector.
- Do not turn on the projector without air filter.

Avoid a high temperature environment.

The heat could have adverse influence on the cabinet of the projector and other parts. Do not place the projector, the remote control and other parts in direct sunlight or near a hot object such as heater, etc.

Avoid Magnetism.

Manufacture strongly recommends to avoid any magnetic contact that is not shielded or protected on or near the projector itself. (ie.,. Magnetic Security Devices, or other projector accessory that contains magnetic material that has not been provided by the manufacture etc.) Magnetic objects may cause interruption of the projector's internal mechanical performance which may interfere with cooling fans speed or stopping, and may cause the projector to completely shut down.

Safety Precautions (continued)

⚠ CAUTION

Remove the power cord for complete separation.

- For safety purposes, disconnect the power cord if the projector is not to be used for prolonged periods of time.
- Before cleaning, turn off and unplug the projector. Neglect could result in fire or electrical shock.

Disconnect the plug from the power outlet.

Ask your dealer to cleaning inside of the projector about every year.

Accumulations of dust inside the projector cause result in fire or malfunction. Cleaning inside is more effective if performed before every humid periods such as rainy season.

- Do not clean inside yourself because it is dangerous.

NOTE

Do not give the remote control any physical impact.

A physical impact could cause damage or malfunction of the remote control.

- Take care not to drop the remote control.
- Do not place the projector or heavy objects on the remote control.

Take care of the lens.

- Close the slide lens door or attach the lens cap to prevent the lens surface being scratched when the projector is not used.
- Do not touch the lens to prevent fog or dirt of the lens that cause deterioration of display quality.
- Use commercially available lens tissue to clean the lens (used to clean cameras, eyeglasses, etc.). Be careful not to scratch the lens with hard objects.

Take care of the cabinet and the remote control.

Incorrect care could have adverse influence such as discoloration, peeling paint, etc.

- Use a soft cloth to clean the cabinet and control panel of the projector and the remote control. When excessively soiled dilute a neutral detergent in water, wet and wring out the soft cloth and afterward wipe with a dry soft cloth. Do not use undiluted detergent directly.
- Do not use an aerosol sprays, solvents, volatile substances or abrasive cleaner.
- Before using chemical wipes, be sure to read and observe the instructions.
- Do not allow long-term close contact with rubber or vinyl.

About bright spots or dark spots.

Although bright spots or dark spots may appear on the screen, this is a unique characteristic of liquid crystal displays, and such do not constitute or imply a machine defect.

Be careful of printing of the LCD panel.

If the projector continues projecting a still image, inactive images or 16:9 aspect images in case of 4:3 panel, etc., for long time, the LCD panel might possibly be printed.

Safety Precautions (continued)

NOTE

About consumables.

Lamp, LCD panels, polarizors and other optical components, and air filter and cooling fans have a different lifetime in each. These parts may need to be replaced after a long usage time.

- This product isn't designed for continuous use of long time. In the case of continuous use for 6 hours or more, or use for 6 hours or more every day (even if it isn't continuous), or repetitious use, the lifetime may be shortened, and these parts may need to be replaced even if one year has not passed since the beginning of using.
- Any inclining use beyond the adjustment range explained in these user's manuals may shorten the lifetimes of the consumables.

Before turning on the power, make the projector cool down adequately.

After turning the projector off, pushing the restart switch or interrupting of the power supply, make the projector cool down adequately. Operation in a high temperature state of the projector causes a damage of the electrode and un-lighting of the lamp.

Avoid strong rays.

Any strong ray (such as direct rays of the sun or room lighting) onto the remote control sensors could invalidate the remote control.

Avoid radio interference.

Any interfering radiation could cause disordered image or noises.

- Avoid radio generator such as a mobile telephone, transceiver, etc. around the projector.

About displaying characteristic.

The display condition of the projector (such as color, contrast, etc.) depends on characteristic of the screen, because the projector uses a liquid crystal display panel. The display condition can differ from the display of CRT.

- Do not use a polarized screen. It can cause red image.

Turn the power on/off in right order.

To prevent any trouble, turn on/off the projector in right order mentioned below unless specifying.

- Power on the projector before the computer or video tape recorder.
- Power off the projector after the computer or video tape recorder.

Take care not to fatigue your eyes.

Rest the eyes periodically.

Set the sound volume at a suitable level to avoid bothering other people.

- It is better to keep the volume level low and close the windows at night to protect the neighborhood environment.

Connecting with notebook computer

When connecting with notebook computer, set to valid the RGB external image output (setting CRT display or simultaneous display of LCD and CRT).

Please read instruction manual of the notebook for more information.

Lamp

⚠ WARNING

⚠ HIGH VOLTAGE ⚠ HIGH TEMPERATURE ⚠ HIGH PRESSURE

The projector uses a high-pressure mercury glass lamp. The lamp can **break with a loud bang, or burn out,** if jolted or scratched, handled while hot, or worn over time. Note that each lamp has a different lifetime, and some may burst or burn out soon after you start using them. In addition, when the bulb bursts, it is possible for **shards of glass** to fly into the lamp housing, and for **gas containing mercury** to escape from the projector's vent holes.

About disposal of a lamp • This product contains a mercury lamp; do not put in trash. Dispose of in accord with environmental laws.
For lamp recycling, go to www.lamprecycle.org. (in USA)
For product disposal, contact your local government agency or www.eiae.org (in the US) or www.epsc.ca (in Canada).
For more information, call your dealer.

Disconnect the plug from the power outlet

- If the lamp should break (it will make a loud bang when it does), unplug the power cord from the outlet, and make sure to request a replacement lamp from your local dealer. Note that shards of glass could damage the projector's internals, or cause injury during handling, so please do not try to clean the projector or replace the lamp yourself.
- If the lamp should break (it will make a loud bang when it does), ventilate the room well, and make sure not to breathe the gas that comes out of the projector vents, or get it in your eyes or mouth.
- Before replacing the lamp, make sure the power switch is off and the power cable is not plugged in, then wait at least 45 minutes for the lamp to cool sufficiently. Handling the lamp while hot can cause burns, as well as damaging the lamp.

⊘

- Do not open the lamp cover while the projector is suspended from above. This is dangerous, since if the lamp's bulb has broken, the shards will fall out when the cover is opened. In addition, working in high places is dangerous, so ask your local dealer to have the lamp replaced even if the bulb is not broken.
- Do not use the projector with the lamp cover removed. At the lamp replacing, make sure that the screws are screwed in firmly. Loose screws could result in damage or injury.

❗

- Use the lamp of the specified type only.
- If the lamp breaks soon after the first time it is used, it is possible that there are electrical problems elsewhere besides the lamp. If this happens, contact your local dealer or a service representative.
- Handle with care: jolting or scratching could cause the lamp bulb to burst during use.
- Using the lamp for long periods of time, could cause it dark, not to light up or to burst. When the pictures appear dark, or when the color tone is poor, please replace the lamp as soon as possible. Do not use old (used) lamps; this is a cause of breakage.

Regulatory Notices

FCC Statement Warning

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

WARNING: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

INSTRUCTIONS TO USERS: This equipment complies with the requirements of FCC (Federal Communication Commission) equipment provided that the following conditions are met. Some cables have to be used with the core set. Use the accessory cable or a designated-type cable for the connection. For cables that have a core only at one end, connect the core to the projector.

CAUTION: Changes or modifications not expressly approved by the party responsible for compliance could void the user’s authority to operate the equipment.

For the Customers in CANADA

NOTICE: This Class B digital apparatus complies with Canadian ICES-003.

Warranty And After-Service

Unless seen any abnormal operations (mentioned with the first paragraph of WARNING in this manual), when a problem occurs with the equipment, first refer to the “Troubleshooting” section of the “Operating Guide”, and run through the suggested checks. If this does not resolve the problem contact your dealer or service company. They will tell you what warranty condition is applied.

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↔ Keystone, Perfect fit, Picture mode,
Eco mode, Mirror, Reset, Filter time,
Language, Advanced menu, Exit
PICTURE menu 33
Brightness, Contrast, Gamma, Color temp,
Color, Tint, Sharpness, Active iris, My memory
IMAGE menu 36
Aspect, Over scan, V position, H position,
H phase, H size, Auto adjust execute
INPUT menu 39
Progressive, Video nr, Color space,
Component, Video format, Hdmi format,
Hdmi range, Computer in, Frame lock,
Resolution
SETUP menu 43
Auto keystone, ↕ Keystone, ↔ Keystone,
Perfect fit, Auto eco mode,
Eco mode, Mirror, Standby mode,
Monitor out
AUDIO menu 46
Volume, Speaker, Audio source,
Hdmi audio, Mic level, Mic volume
SCREEN menu. 48
Language, Menu position, Blank,
Start up, MyScreen, MyScreen Lock,
Message, Source name, Template, C.c.
OPTION menu 54
Auto search, Auto keystone,
Direct power on, Auto power off,
Usb type b, Lamp time, Filter time,
My button, My source, Service
NETWORK menu 64
Setup, Projector name, My image,
Amx d.d., Presentation, Information,
Service
SECURITY menu 71
Security password change,
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Introduction

Features

The projector provides you with the broad use by the following features.

- ✓ This projector has a variety of I/O ports that supposedly cover for any business scene. The **HDMI** port can support various image equipment which have digital interface to get clearer pictures on a screen.
- ✓ This projector has a 1.7 times optical zoom, horizontal and vertical manual lens shift, allowing flexible installation.
- ✓ If you insert a USB storage device, such as a USB memory, into the **USB TYPE A** port and select the port as the input source, you can view images stored in the device.
- ✓ This projector can be controlled and monitored via LAN connection.
- ✓ The built-in 16W speaker can deliver sufficient sound volume in a large space like a classroom without external speakers.

Checking the contents of package

Please see the **Contents of package** section in the **User's Manual (concise)** which is a book. Your projector should come with the items shown there. Require of your dealer immediately if any items are missing.

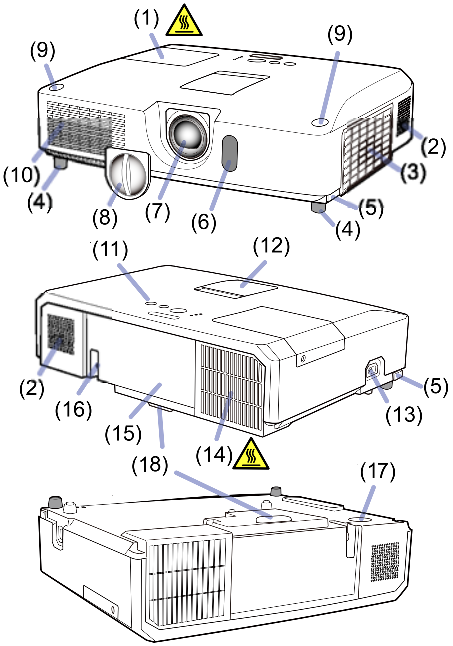
NOTE • Keep the original packing materials, for future reshipment. Be sure to use the original packing materials when moving the projector. Use special caution for the lens.

• The projector may make a rattling sound when tilted, moved or shaken, since a flap to control the air flow inside of the projector has moved. Be aware that this is not a failure or malfunction.

Part names

Projector

(1) Lamp cover (📖***89***)
The lamp unit is inside.
(2) Speakers (x2) (📖***19***, ***46***)
(3) Filter cover (📖***91***)
The air filter and intake vent are inside.
(4) Elevator feet (x2) (📖***22***)
(5) Elevator buttons (x2) (📖***22***)
(6) Remote sensor (📖***16***)
(7) Lens (📖***94***)
(8) Lens cover
(9) Pocket caps
(10) Intake vents
(11) Control panel (📖***5***)
(12) Lens adjuster door (📖***5***)
The adjusters for the lens are behind the door.
(13) **AC IN** (AC inlet) (📖***15***)
(14) Exhaust vent
(15) Rear panel (📖***5***)
(16) Security bar (📖***15)***
(17) Battery cover (📖***93***)
The internal clock battery is inside.
(18) Heel



⚠**WARNING** ►Do not open or remove any portion of the product, unless the manuals direct it.
►Do not subject the projector to unstable conditions.
►Do not apply a shock or pressure to this product.
►Do not look into the lens and the openings on the projector while the lamp is on.
►Keep the pocket caps away from children and pets. Make sure they do not swallow the caps. If swallowed consult a physician immediately for emergency treatment.

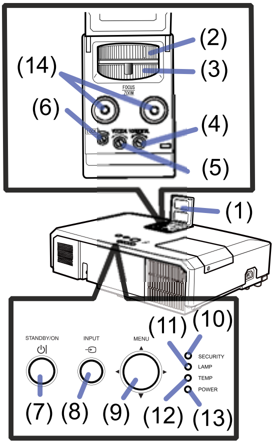
⚠**CAUTION** ►Do not touch around the lamp cover and the exhaust vents during use or just after use, since it is too hot.
►Do not attach anything onto the lens except the lens cover of this projector because it could damage the lens, such as melting the lens.

(continued on next page)

Part names (continued)

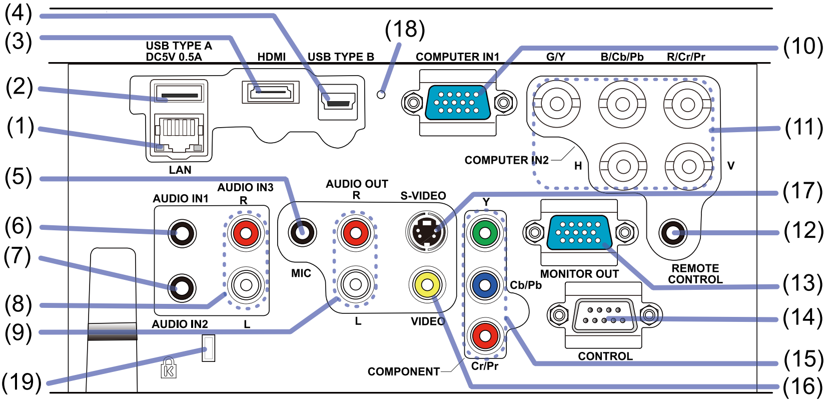
Control panel and Lens adjusters

(1) Lens adjuster door
(2) **FOCUS** ring (📖*23*)
(3) **ZOOM** ring (📖*23*)
(4) **HORIZONTAL** (horizontal) adjuster (📖*23*)
(5) **VERTICAL** (vertical) adjuster (📖23)
(6) **LOCK** (horizontal lens position lock) (📖*23*)
(7) **STANDBY/ON** button (📖*18*)
(8) **INPUT** button (📖*19*)
(9) **MENU** button (📖*29*)
(10) **SECURITY** indicator (📖*76*)
(11) **LAMP** indicator (📖*97*)
(12) **TEMP** indicator (📖*97*)
(13) **POWER** indicator (📖*97*)
(14) Cap storage pockets


(2)
(3)
(14)
(6)
FOCUS
ZOOM
(4)
(5)
(1)
(11)
(10)
STANDBY/ON
INPUT
MENU
SECURITY
LAMP
TEMP
POWER
(7)
(8)
(9)
(12)
(13)

Rear panel (📖*10 ~ 14*)

(1) **LAN** port
(2) **USB TYPE A** port
(3) **HDMI** port
(4) **USB TYPE B** port
(5) **MIC** port (📖*14*)
(6) **AUDIO IN1** port
(7) **AUDIO IN2** port
(8) **AUDIO IN3** (**R,L**) ports
(9) **AUDIO OUT** (**R,L**) ports
(10) **COMPUTER IN1** port
(11) **COMPUTER IN2** ports (📖*15*)
(**G/Y**, **B/Cb/Pb**, **R/Cr/Pr**, **H, V**)
(12) **REMOTE CONTROL** port
(13) **MONITOR OUT** port
(14) **CONTROL** port
(15) **COMPONENT** ports (**Y**,**Cb/Pb**, **Cr/Pr**)
(16) **VIDEO** port
(17) **S-VIDEO** ports
(18) Shutdown switch (📖*98*)
(19) Security slot (📖*15*)

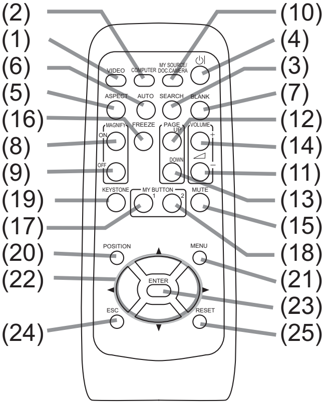

(4)
(3)
(18)
(10)
USB TYPE A
DC5V 0.5A
HDMI
USB TYPE B
COMPUTER IN1
G/Y
B/Cb/Pb
R/Cr/Pr
(2)
(1)
(11)
LAN
COMPUTER IN2
H
V
(5)
AUDIO IN1
AUDIO IN3
R
AUDIO OUT
R
S-VIDEO
(17)
Y
(6)
(12)
(7)
MIC
MONITOR OUT
REMOTE CONTROL
Cb/Pb
(13)
(8)
(14)
(9)
AUDIO IN2
L
L
VIDEO
CONTROL
(19)
COMPONENT
Cr/Pr
(15)
(16)

(continued on next page)

Part names (continued)

Remote control

(1) **VIDEO** button (📖***20***)
(2) **COMPUTER** button (📖***20***)
(3) **SEARCH** button (📖***21***)
(4) **STANDBY/ON** button (📖***18***)
(5) **ASPECT** button (📖***21***)
(6) **AUTO** button (📖***24***)
(7) **BLANK** button (📖***28***)
(8) **MAGNIFY - ON** button (📖***27***)
(9) **MAGNIFY - OFF** button (📖***27***)
(10) **MY SOURCE/DOC.CAMERA** button (📖***20***, ***58***)
(11) **VOLUME -** button (📖***19***)
(12) **PAGE UP** button (📖***17***)
(13) **PAGE DOWN** button (📖***17***)
(14) **VOLUME +** button (📖***19***)
(15) **MUTE** button (📖***19***)
(16) **FREEZE** button (📖***28***)
(17) **MY BUTTON - 1** button (📖***57***)
(18) **MY BUTTON - 2** button (📖***57***)
(19) **KEYSTONE** button (📖***25***)
(20) **POSITION** button (📖***24, 30***)
(21) **MENU** button (📖***29***)
(22) ▲/▼/◄/► cursor buttons (📖***29***)
(23) **ENTER** button (📖***29***)
(24) **ESC** button (📖***30***)
(25) **RESET** button (📖***30***)
(26) Battery cover (📖***16***)


(2)
(1)
(6)
(5)
(16)
(8)
(9)
(19)
(17)
(20)
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(24)
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(12)
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(11)
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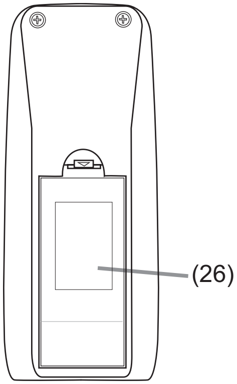
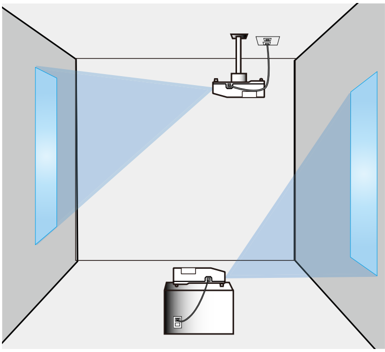
(15)
(18)
(21)
(23)
(25)
VIDEO
COMPUTER
MY SOURCE/ DOC.CAMERA
ASPECT
AUTO
SEARCH
BLANK
MAGNIFY
ON
OFF
FREEZE
PAGE UP
DOWN
VOLUME
KEYSTONE
MY BUTTON
1
2
MUTE
POSITION
MENU
ENTER
ESC
RESET



Back of
the remote control

Setting up



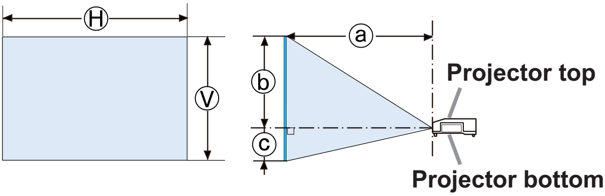
Install the projector according to the environment and manner the projector will be used in.

For the case of installation in a special state such as ceiling mount, the specified mounting accessories (📖**Specifications** in the **User's manual (concise)**) and service may be required. Before installing the projector, consult your dealer about your installation.

Arrangement

Refer to the following tables **T-1** and **T-2** to determine the screen size and projection distance. The values shown in the table are calculated for a full size screen.

Ⓗ × Ⓥ : Screen size
ⓐ : Projection distance
(from the projector's end)
ⓑ , ⓒ : Screen height



T-1: CP-X4021N, CP-X5021N (1024X768) (±10%)

Screen type	4:3										16:9									
	Screen size		Projection distance				Screen height				Screen size		Projection distance				Screen height			
	Ⓗ	Ⓥ	ⓐ min.		ⓐ max.		ⓑ		ⓒ		Ⓗ	Ⓥ	ⓐ min.		ⓐ max.		ⓑ		ⓒ	
(inch)	m	m	m	inch	m	inch	cm	inch	cm	inch	m	m	m	inch	m	inch	cm	inch	cm	inch
30	0.6	0.5	0.9	34	1.5	57	46	18	0	0	0.7	0.4	0.9	37	1.6	63	44	17	6	2
40	0.8	0.6	1.2	46	2.0	77	61	24	0	0	0.9	0.5	1.3	50	2.1	84	58	23	8	3
50	1.0	0.8	1.5	58	2.5	97	76	30	0	0	1.1	0.6	1.6	63	2.7	106	73	29	10	4
60	1.2	0.9	1.8	70	3.0	117	91	36	0	0	1.3	0.7	1.9	76	3.2	128	87	34	12	5
70	1.4	1.1	2.1	82	3.5	137	107	42	0	0	1.5	0.9	2.3	90	3.8	150	102	40	15	6
80	1.6	1.2	2.4	94	4.0	157	122	48	0	0	1.8	1.0	2.6	103	4.3	171	116	46	17	7
90	1.8	1.4	2.7	106	4.5	177	137	54	0	0	2.0	1.1	2.9	116	4.9	193	131	51	19	7
100	2.0	1.5	3.0	118	5.0	197	152	60	0	0	2.2	1.2	3.3	129	5.5	215	145	57	21	8
120	2.4	1.8	3.6	142	6.0	237	183	72	0	0	2.7	1.5	3.9	155	6.6	258	174	69	25	10
150	3.0	2.3	4.5	179	7.5	297	229	90	0	0	3.3	1.9	5.0	195	8.2	323	218	86	31	12
200	4.1	3.0	6.1	239	10.1	396	305	120	0	0	4.4	2.5	6.6	261	11.0	432	291	114	42	16
250	5.1	3.8	7.6	300	12.6	496	381	150	0	0	5.5	3.1	8.3	327	13.7	541	363	143	52	20
300	6.1	4.6	9.1	360	15.1	596	457	180	0	0	6.6	3.7	10.0	393	16.5	650	436	172	62	25

(continued on next page)

Arrangement (continued)

T-2: CP-WX4021N (1280X800) (±10%)

Screen type	16:10										4:3									
	Screen size		Projection distance				Screen height				Screen size		Projection distance				Screen height			
	Ⓗ	Ⓥ	ⓐ min.		ⓐ max.		ⓑ		ⓒ		Ⓗ	Ⓥ	ⓐ min.		ⓐ max.		ⓑ		ⓒ	
(inch)	m	m	m	inch	m	inch	cm	inch	cm	inch	m	m	m	inch	m	inch	cm	inch	cm	inch
30	0.6	0.4	0.9	36	1.5	61	44	17	4	2	0.6	0.5	1.0	41	1.8	69	51	20	6	2
40	0.9	0.5	1.2	49	2.1	82	59	23	5	2	0.8	0.6	1.4	55	2.4	93	69	27	8	3
50	1.1	0.7	1.6	61	2.6	103	74	29	7	3	1.0	0.8	1.8	70	3.0	117	86	34	10	4
60	1.3	0.8	1.9	74	3.2	124	89	35	8	3	1.2	0.9	2.1	84	3.6	141	103	41	11	5
70	1.5	0.9	2.2	87	3.7	145	104	41	9	4	1.4	1.1	2.5	99	4.2	165	120	47	13	5
80	1.7	1.1	2.5	100	4.3	167	118	47	11	4	1.6	1.2	2.9	113	4.8	189	137	54	15	6
90	1.9	1.2	2.9	113	4.8	188	133	52	12	5	1.8	1.4	3.3	128	5.4	213	154	61	17	7
100	2.2	1.3	3.2	126	5.3	209	148	58	13	5	2.0	1.5	3.6	142	6.0	237	171	68	19	8
120	2.6	1.6	3.8	151	6.4	251	178	70	16	6	2.4	1.8	4.4	172	7.2	285	206	81	23	9
150	3.2	2.0	4.8	190	8.0	315	222	87	20	8	3.0	2.3	5.5	215	9.1	357	257	101	29	11
200	4.3	2.7	6.4	254	10.7	421	296	117	27	11	4.1	3.0	7.3	288	12.1	476	343	135	38	15
250	5.4	3.4	8.1	318	13.4	526	370	146	34	13	5.1	3.8	9.2	360	15.1	596	429	169	48	19
300	6.5	4.0	9.7	382	16.1	632	444	175	40	16	6.1	4.6	11.0	433	18.2	716	514	203	57	23

⚠**WARNING** ►**Install the projector where you can access the power outlet easily.** If an abnormality should occur, unplug the projector urgently. Otherwise it could cause a fire or electric shock.

►**Do not subject the projector to unstable conditions.** If the projector falls or topples over, it could result in injury or damage to the projector and the surrounding things. Using a damaged projector could result in a fire and an electric shock.

- Do not place the projector in unstable places, such as an inclined surface, places subject to vibration, on top of a wobbly table or cart, or a surface that is smaller than the projector.
- Do not put the projector on its side, front or rear position.
- Do not attach nor place anything on the projector unless otherwise specified in the manual.
- Do not use any mounting accessories except the accessories specified by the manufacturer. Read and keep the manuals of the accessories used.
- For special installation such as ceiling mounting, be sure to consult your dealer beforehand.

(continued on next page)

Arrangement (continued)

⚠**WARNING** ►**Do not install the projector near thermally conductive or flammable things.** Such things when heated by the projector could result in a fire and burns.

- Do not place the projector on a metal stand.

►**Do not place the projector where any oils, such as cooking or machine oil, are used.** Oil may harm the product, resulting in malfunction, or falling from the mounted position.

►**Do not place the projector in a place where it may get wet.** Getting the projector wet or inserting liquid into the projector could cause a fire and an electric shock, and damage the projector.

- Do not place the projector near water, such as in a bathroom, kitchen, or poolside.
- Do not place the projector outdoors or by the window.
- Do not place anything containing liquid near the projector.

⚠**CAUTION** ►**Place the projector in a cool place with sufficient ventilation.** The projector may shutdown automatically or may malfunction if its internal temperature is too high.

Using a damaged projector could result in a fire and an electric shock.

- Do not place the projector in direct sunlight or near hot objects such as heaters.
- Keep a space of 30 cm or more between a side of the projector and other objects such as walls.
- Do not place the projector on carpet, cushions or bedding.
- Do not stop up, block nor cover the projector's vent holes. Do not place anything around the projector that could be sucked in or stuck to the projector's intake vents.
- Do not place the projector at places that are exposed to magnetic fields, doing so can cause the cooling fans inside the projector to malfunction.

►**Avoid placing the projector in smoky, humid or dusty place.** Placing the projector in such places could cause a fire, an electric shock and malfunction of the projector.

- Do not place the projector near humidifiers. Especially for an ultrasonic humidifier, chlorine and minerals contained in tap water are atomized and could be deposited in the projector causing image degradation or other problems.
- Do not place the projector in a smoking area, kitchen, passageway or by the window.

NOTICE • Position the projector to prevent light from directly hitting the projector's remote sensor.

- Do not place the product in a place where radio interference may be caused.
- Keep heat-sensitive things away from the projector. Otherwise, they may be damaged by the heat from the projector.

Connecting with your devices

Before connecting the projector to a device, consult the manual of the device to confirm that the device is suitable for connecting with this projector and prepare the required accessories, such as a cable in accord with the signal of the device. Consult your dealer when the required accessory did not come with the product or the accessory is damaged.

After making sure that the projector and the devices are turned off, perform the connection, according to the following instructions. Refer to the figures in subsequent pages.

Before connecting the projector to a network system, be sure to read **User's Manual - Network Guide** too.

⚠**WARNING** ►**Use only the appropriate accessories.** Otherwise it could cause a fire or damage the projector and devices.

- Use only the accessories specified or recommended by the projector's manufacturer. It may be regulated under some standard.
- Neither disassemble nor modify the projector and the accessories.
- Do not use the damaged accessory. Be careful not to damage the accessories. Route a cable so that it is neither stepped on nor pinched out.

⚠**CAUTION** ►**For a cable with a core at only one end, connect the end with the core to the projector.** That may be required by EMI regulations.

NOTE • Do not turn on or off the projector while connected to a device in operation, unless that is directed in the manual of the device. Otherwise it may cause malfunction in the device or projector.

• The function of some input ports can be selected according to your usage requirements. Check the reference page indicated beside each port in the following illustration.

• Be careful not to mistakenly connect a connector to a wrong port. Otherwise it may cause malfunction in the device or projector.

- When connecting a connector to a port, make sure that the shape of the connector fits the port.
- Tighten the screws to connect a connector equipped with screws to a port.
- Use the cables with straight plugs, not L-shaped ones, as the input ports of the projector are recessed.

About Plug-and-Play capability

• Plug-and-Play is a system composed of a computer, its operating system and peripheral equipment (i.e. display devices). This projector is VESA DDC 2B compatible. Plug-and-Play can be used by connecting this projector to a computer that is VESA DDC (display data channel) compatible.

- Take advantage of this feature by connecting a computer cable to the **COMPUTER IN1** port (DDC 2B compatible). Plug-and-Play may not work properly if any other type of connection is attempted.
- Please use the standard drivers in your computer as this projector is a Plug-and-Play monitor.

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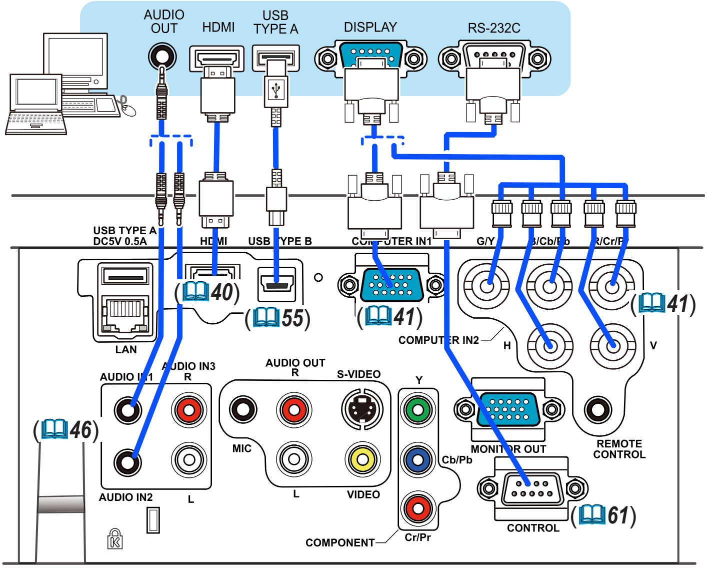
Connecting with your devices (continued)

Computer


AUDIO OUT
HDMI
USB TYPE A
DISPLAY
RS-232C
USB TYPE A DC5V 0.5A
HDMI
USB TYPE B
COMPUTER IN1
G/Y
B/Cb/Pb
R/Cr/Pr
LAN
(40)
(55)
(41)
(41)
COMPUTER IN2
H
V
AUDIO IN1
AUDIO IN3 R
AUDIO OUT R
S-VIDEO
Y
(46)
MIC
Cb/Pb
MONITOR OUT
REMOTE CONTROL
AUDIO IN2
L
L
VIDEO
CONTROL
(61)
COMPONENT
Cr/Pr

NOTE • Before connecting the projector to a computer, consult the computer's manual and check the compatibility of the signal level, the synchronization methods and the display resolution output to the projector.

- Some signal may need an adapter to input this projector.
- Some computers have multiple screen display modes that may include some signals which are not supported by this projector.
- Although the projector can display signals with resolution up to UXGA (1600X1200), the signal will be converted to the projector's panel resolution before being displayed. The best display performance will be achieved if the resolutions of the input signal and the projector panel are identical.

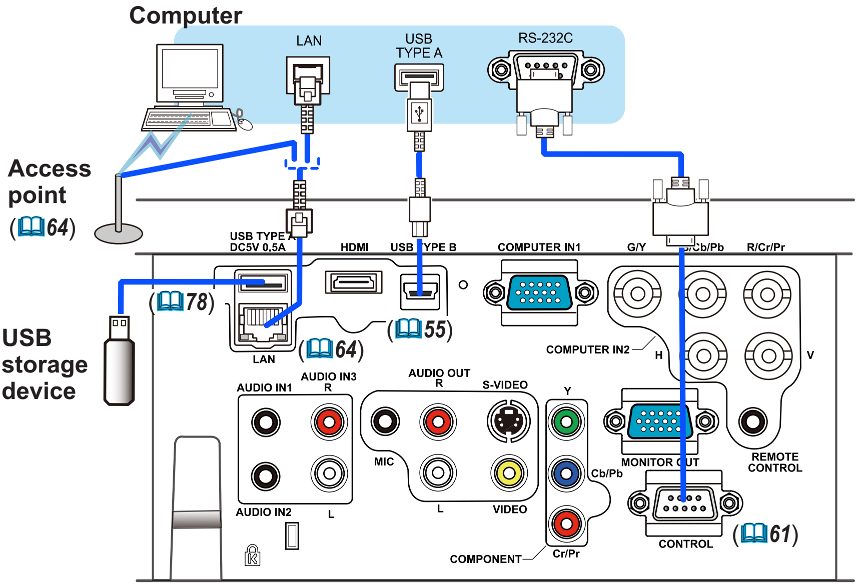
• If you connect this projector and a notebook computer, you need output the display to an external monitor, or output simultaneously to the internal display and an external monitor. Consult the computer's manual for the setting.

• Depending on the input signal, the automatic adjustment function of this projector may take some time and not function correctly.

- Note that a composite sync signal or sync-on-green signal may confuse the automatic adjustment function of this projector (*41*).
- If the automatic adjustment function does not work correctly, you may not see the dialog to set the display resolution. In such a case, use an external display device. You may be able to see the dialog and set an appropriate display resolution.

(continued on next page)

Connecting with your devices (continued)


Computer
LAN
USB TYPE A
RS-232C
Access point
(📖64)
USB storage device
(📖78)
USB TYPE A DC5V 0.5A
HDMI
USB TYPE B
COMPUTER IN1
G/Y
B/Cb/Pb
R/Cr/Pr
LAN
(📖64)
(📖55)
COMPUTER IN2
H
V
AUDIO IN1
AUDIO IN3 R
AUDIO OUT R
S-VIDEO
Y
MIC
MONITOR OUT
REMOTE CONTROL
Cb/Pb
AUDIO IN2
L
L
VIDEO
CONTROL
(📖61)
COMPONENT
Cr/Pr

⚠**CAUTION** ►Before connecting the projector to a network system be sure to obtain the consent of the administrator of the network.

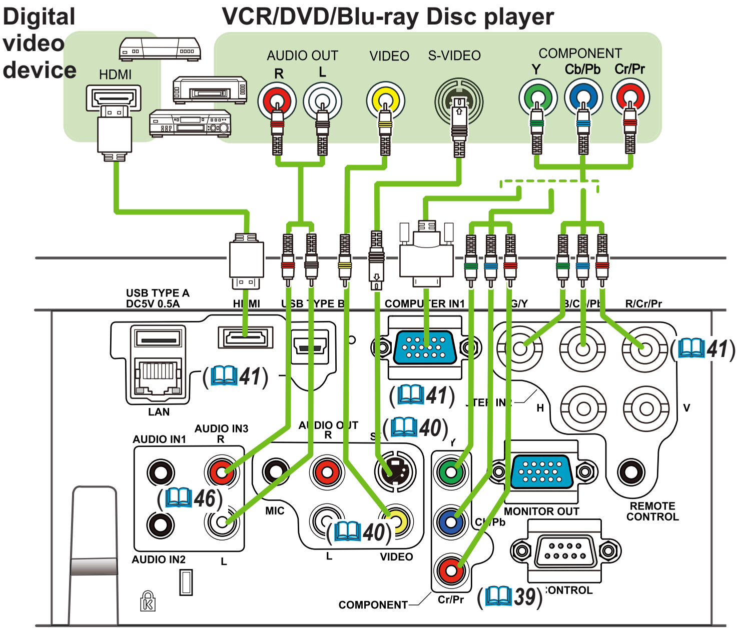
►Do not connect the **LAN** port to any network that might have the excessive voltage.

►Before removing the USB storage device from the port of the projector, be sure to use the REMOVE USB function on the thumbnail screen to secure your data. (📖*80*)

NOTE • If an oversized USB storage device blocks the **LAN** port, use a USB extension cable to connect the USB storage device.

(continued on next page)

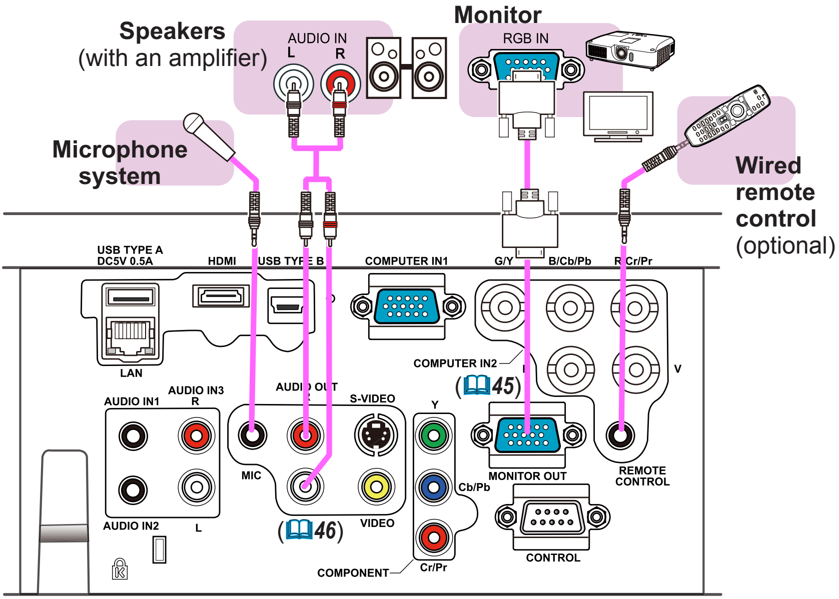
Connecting with your devices (continued)


Digital video device
VCR/DVD/Blu-ray Disc player
HDMI
AUDIO OUT
R
L
VIDEO
S-VIDEO
COMPONENT
Y
Cb/Pb
Cr/Pr
USB TYPE A
DC5V 0.5A
HDMI
USB TYPE B
COMPUTER IN1
G/Y
B/Cb/Pb
R/Cr/Pr
(41)
(41)
(41)
COMPUTER IN2
H
V
LAN
AUDIO IN1
AUDIO IN3
R
AUDIO OUT
R
S
(40)
Y
(46)
MIC
(40)
Cb/Pb
MONITOR OUT
REMOTE CONTROL
AUDIO IN2
L
L
VIDEO
COMPONENT
Cr/Pr
(39)
CONTROL

NOTE • The **HDMI** port of this model is compatible with HDCP (High-bandwidth Digital Content Protection) and therefore capable of displaying a video signal from HDCP compatible DVD players or the like.
- The HDMI supports the following video signals:
  480i@60,480p@60,576i@50,576p@50,720p@50/60,1080i@50/60,1080p@50/60
- This projector can be connected with another equipment that has HDMI connector, but with some equipment the projector may not work properly, something like no video.
- Be sure to use an HDMI cable that has the HDMI logo.
- When the projector is connected with a device having DVI connector, use a DVI to HDMI cable to connect with the HDMI input.

(continued on next page)

Connecting with your devices (continued)

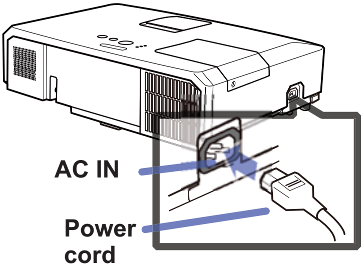

Speakers
(with an amplifier)
AUDIO IN
L
R
Monitor
RGB IN
Microphone system
Wired remote control (optional)
USB TYPE A
DC5V 0.5A
HDMI
USB TYPE B
COMPUTER IN1
G/Y
B/Cb/Pb
R Cr/Pr
LAN
COMPUTER IN2
(📖45)
H
V
AUDIO IN1
AUDIO IN3
R
AUDIO OUT
S-VIDEO
Y
MIC
Cb/Pb
MONITOR OUT
REMOTE CONTROL
AUDIO IN2
L
(📖46)
VIDEO
CONTROL
COMPONENT
Cr/Pr

NOTE • If a loud feedback noise is produced from the speaker, move the microphone away from the speaker.
- This projector doesn't support plug-in power for the microphone.

Microphone function

- You can connect a dynamic microphone to the **MIC** port with a 3.5 mm mini-plug. In that case, the built-in speaker outputs the sound from the microphone, even while the sound from the projector is output. You can input line level signal to the **MIC** port from equipment such as wireless microphone. Select HIGH in the MIC LEVEL item of the AUDIO menu when you input line level audio signal to the **MIC** port. In the normal mode, the volume of the microphone can be adjusted separately from the volume of the projector using the menu. (📖*46, 47*)
In the standby mode, the volume of the microphone is adjustable with the **VOLUME +/-** buttons on the remote control, in synchronization with the volume of the projector. (📖*19*)
Even when the sound of projector is set to mute mode by the AUDIO SOURCE function (📖*46*), the volume of the microphone is adjustable.
In both modes (standby or normal), the **MUTE** button on the remote control works on the sounds of the microphone and the projector. (📖*19*)
- This projector doesn't support plug-in power for the microphone.

Connecting to a power supply



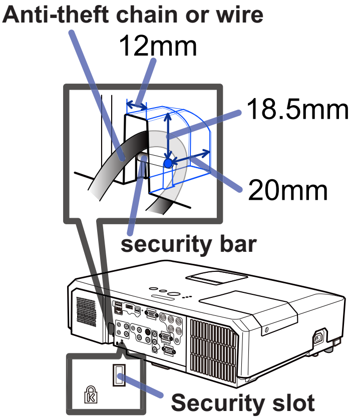
1. Put the connector of the power cord into the **AC IN** (AC inlet) of the projector.
2. Firmly plug the power cord's plug into the outlet. In a couple of seconds after the power supply connection, the **POWER** indicator will light up in steady orange.

Please remember that when the DIRECT POWER ON function activated (📖***54***), the connection of the power supply make the projector turn on.

⚠**WARNING** ►Please use extra caution when connecting the power cord, as incorrect or faulty connections may result in fire and/or electrical shock.
- Only use the power cord that came with the projector. If it is damaged, consult your dealer to get a new one.
- Only plug the power cord into an outlet whose voltage is matched to the power cord. The power outlet should be close to the projector and easily accessible. Remove the power cord for complete separation.
- Never modify the power cord.

Using the security bar and slot

A commercially available anti-theft chain or wire can be attached to the security bar on the projector. Refer to the figure to choose an anti-theft chain or wire.
Also this product has the security slot for the Kensington lock.
For details, see the manual of the security tool.



⚠**WARNING** ►Do not use the security bar and slot to prevent the projector from falling down, since it is not designed for it.

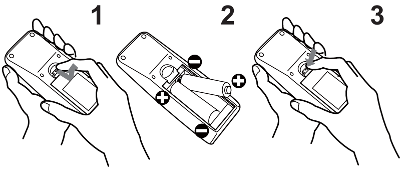
⚠**CAUTION** ►Do not place anti-theft chain or wire near the exhaust vents. It may become too hot.

NOTE • The security bar and slot is not comprehensive theft prevention measures. It is intended to be used as supplemental theft prevention measure.

Remote control

Installing the batteries

Please insert the batteries into the remote control before using it. If the remote control starts to malfunction, try to replace the batteries. If you will not use the remote control for long period, remove the batteries from the remote control and store them in a safe place.

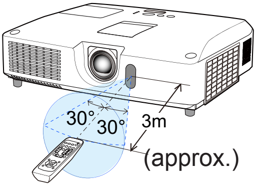


1. Holding the hook part of the battery cover, remove it.
2. Align and insert the two AA batteries **(HITACHI MAXELL, Part No.LR6 or R6P)** according to their plus and minus terminals as indicated in the remote control.
3. Replace the battery cover in the direction of the arrow and snap it back into place.

⚠**WARNING** ►Always handle the batteries with care and use them only as directed. Improper use may result in battery explosion, cracking or leakage, which could result in fire, injury and/or pollution of the surrounding environment.

- Be sure to use only the batteries specified. Do not use batteries of different types at the same time. Do not mix a new battery with used one.
- Make sure the plus and minus terminals are correctly aligned when loading a battery.
- Keep a battery away from children and pets.
- Do not recharge, short circuit, solder or disassemble a battery.
- Do not place a battery in a fire or water. Keep batteries in a dark, cool and dry place.
- If you observe battery leakage, wipe out the leakage and then replace a battery. If the leakage adheres to your body or clothes, rinse well with water immediately.
- Obey the local laws on disposing the battery.

About the remote control signal



The remote control works with the projector's remote sensor. This projector has a remote sensor on the front. The sensor senses the signal within the following range when the sensor is active:

60 degrees (30 degrees to the left and right of the sensor) within 3 meters about.

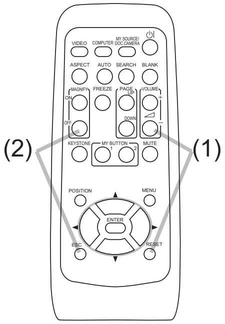
NOTE • The remote control signal reflected in the screen or the like may be available. If it is difficult to send the signal to the sensor directly, attempt to make the signal reflect.
• The remote control uses infrared light to send signals to the projector (Class 1 LED), so be sure to use the remote control in an area free from obstacles that could block the remote control's signal to the projector.
• The remote control may not work correctly if strong light (such as direct sun light) or light from an extremely close range (such as from an inverter fluorescent lamp) shines on the remote sensor of the projector. Adjust the position of projector avoiding those lights.

Changing the frequency of remote control signal

The accessory remote control has the two choices on signal frequency Mode 1:NORMAL and Mode 2:HIGH. If the remote control does not function properly, attempt to change the signal frequency. In order to set the Mode, please keep pressing the combination of two buttons listed below simultaneously for about 3 seconds.

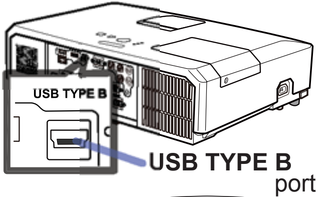
(1) Set to Mode 1:NORMAL... **VOLUME -** and **RESET** buttons
(2) Set to Mode 2:HIGH... **MAGNIFY OFF** and **ESC** buttons

Please remember that the REMOTE FREQ. in the SERVICE item of the OPTION menu (🕮*60*) of the projector to be controlled should be set to the same mode as the remote control.

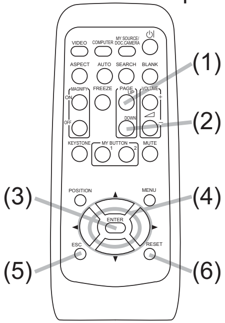

(2)
(1)
VIDEO
COMPUTER
MY SOURCE/ DOC.CAMERA
ASPECT
AUTO
SEARCH
BLANK
MAGNIFY
ON
OFF
FREEZE
PAGE UP
DOWN
VOLUME
KEYSTONE
MY BUTTON
MUTE
POSITION
MENU
ENTER
ESC
RESET

Using as a simple PC mouse & keyboard

The accessory remote control works as a simple mouse and keyboard of the computer, when the projector's **USB TYPE B** port and the computer's type A USB port are connected and MOUSE is selected for the USB TYPE B item in the OPTION menu (🕮*55*).


USB TYPE B
USB TYPE B
port

(1) **PAGE UP key:** Press **PAGE UP** button.
(2) **PAGE DOWN key:** Press **PAGE DOWN** button.
(3) **Mouse left button:** Press **ENTER** button.
(4) **Move pointer:** Use the cursor buttons ▲, ▼, ◄ and ►.
(5) **ESC key:** Press **ESC** button.
(6) **Mouse right button:** Press **RESET** button.


(1)
(2)
(3)
(4)
(5)
(6)
VIDEO
COMPUTER
MY SOURCE/ DOC.CAMERA
ASPECT
AUTO
SEARCH
BLANK
MAGNIFY
ON
OFF
FREEZE
PAGE UP
DOWN
VOLUME
KEYSTONE
MY BUTTON
MUTE
POSITION
MENU
ENTER
ESC
RESET

⚠**NOTICE** ►Improper use of the simple mouse & keyboard function could damage your equipment. While using this function, please connect this product only to a computer. Be sure to check your computer's manuals before connecting this product to the computer.

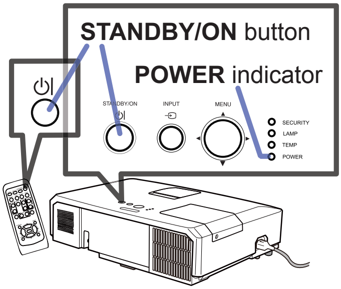
NOTE When the simple mouse & keyboard function of this product does not work correctly, please check the following.

- When a USB cable connects this projector with a computer having a built-in pointing device (e.g. track ball) like a laptop PC, open BIOS setup menu, then select the external mouse and disable the built-in pointing device, because the built-in pointing device may have priority to this function.
- Windows 95 OSR 2.1 or higher is required for this function. And also this function may not work depending on the computer's configurations and mouse drivers. This function can work with the computer which can operate general USB mouse or keyboard.
- You cannot do things like press two buttons at once (for instance, pressing two buttons at the same time to move the mouse pointer diagonally).
- This function is activated only when the projector is working properly. This function is not available in any of the following cases:

- While the lamp is warming up. (The **POWER** indicator blinks in green.)
- When either **USB TYPE A** or **USB TYPE B** port is selected.
- While displaying BLANK (🕮*28*), TEMPLATE (🕮*52*) or MY IMAGE (🕮*67*) screen.
- When any menu is displayed on the screen.
- While using the cursor buttons to operate the sound or screen functions such as adjusting the sound volume, correcting the keystone, correcting the picture position and magnifying the screen.

Power on/off

Turning on the power



1. Make sure that the power cord is firmly and correctly connected to the projector and the outlet.
2. Make sure that the **POWER** indicator is steady orange (📖*97*). Then remove the lens cover.
3. Press **STANDBY/ON** button on the projector or the remote control.
   The projection lamp will light up and **POWER** indicator will begin blinking in green. When the power is completely on, the indicator will stop blinking and light in steady green (📖*97*).

To display the picture, select an input signal according to the section **Selecting an input signal** (📖*19*).

Turning off the power

1. Press the **STANDBY/ON** button on the projector or the remote control.
   The message “Power off?” will appear on the screen for about 5 seconds.
2. Press the **STANDBY/ON** button again while the message appears.
   The projector lamp will go off, and the **POWER** indicator will begin blinking in orange. Then **POWER** indicator will stop blinking and light in steady orange when the lamp cooling is complete (📖*97*).
3. Attach the lens cover, after the **POWER** indicator turns in steady orange.

Do not turn the projector on for about 10 minutes or more after turning it off.
Also, do not turn the projector off shortly after turning it on. Such operations might cause the lamp to malfunction or shorten the lifetime of some parts including the lamp.

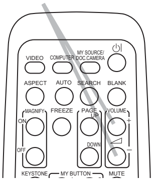
⚠**WARNING** ►A strong light is emitted when the projector’s power is on. Do not look into the lens of the projector or look inside of the projector through any of the projector’s openings.
►Do not touch around the lamp cover and the exhaust vents during use or just after use, since it is too hot.

NOTE • Turn the power on/off in right order. Please power on the projector prior to the connected devices.
• This projector has the function that can make the projector automatically turn on/off. Please refer to the DIRECT POWER ON (📖*54*) and AUTO POWER OFF (📖*55*) items of the OPTION menu.
• Use the shutdown switch (📖*98*) only when the projector is not turned off by normal procedure.

Operating

Adjusting the volume

VOLUME +/- button

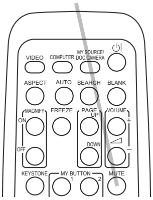

VIDEO
COMPUTER
MY SOURCE/ DOC.CAMERA
ASPECT
AUTO
SEARCH
BLANK
MAGNIFY
ON
OFF
FREEZE
PAGE UP
DOWN
VOLUME
KEYSTONE
MY BUTTON
MUTE

1. Use the **VOLUME +/VOLUME -** buttons to adjust the volume. A dialog will appear on the screen to aid you in adjusting the volume. If you do not do anything, the dialog will automatically disappear after a few seconds.

- When 🔇 is selected for current picture input port, the volume adjustment is disabled. Please see AUDIO SOURCE item of AUDIO menu (📖*46*).
- Even if the projector is in the standby mode, the volume is adjustable when both of the following conditions are true:
  - An option other than 🔇 is selected for STANDBY in the AUDIO SOURCE item of the AUDIO menu (📖*46*).
  - NORMAL is selected in the STANDBY MODE item of the SETUP menu (📖*45*).
- In the standby mode, the volume of the microphone is adjustable with the **VOLUME +/-** buttons on the remote control, in synchronization with the volume of the projector (📖*19*). The volume of the microphone is adjusted regardless of the mode (standby or normal).

Temporarily muting the sound

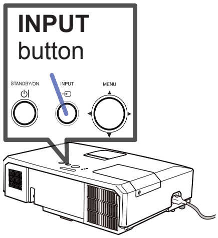
MUTE button


VIDEO
COMPUTER
MY SOURCE/ DOC.CAMERA
ASPECT
AUTO
SEARCH
BLANK
MAGNIFY
ON
OFF
FREEZE
PAGE UP
DOWN
VOLUME
KEYSTONE
MY BUTTON
1
2
MUTE

1. Press **MUTE** button on the remote control. A dialog will appear on the screen indicating that you have muted the sound.
   To restore the sound, press the **MUTE**, **VOLUME +** or **VOLUME -** button. Even if you do not do anything, the dialog will automatically disappear after a few seconds.

- When 🔇 is selected for current picture input port, the sound is always muted. Please see AUDIO SOURCE item of AUDIO menu (📖*46*).
- C.C. (Closed Caption) is automatically activated when sound is muted and an input signal containing C.C. is received. This function is available only when the signal is NTSC for **VIDEO** or **S-VIDEO**, or 480i@60 for **COMPONENT**, **COMPUTER IN1** or **COMPUTER IN2**, and when AUTO is selected for DISPLAY in the C.C. menu under the SCREEN menu (📖*53*).

Selecting an input signal


INPUT
button
STANDBY/ON
INPUT
MENU

1. Press **INPUT** button on the projector. Each time you press the button, the projector switches its input port from the current port as below.

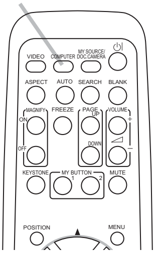
↱ COMPUTER IN1 → COMPUTER IN2 → LAN ↴
VIDEO USB TYPE A
↑ ↓
S-VIDEO USB TYPE B
↰ COMPONENT (Y, Cb/Pb, Cr/Pr) ← HDMI ←

- While ON is selected for AUTO SEARCH item in OPTION menu (📖*54*), the projector will keep checking the ports in above order repeatedly till an input signal is detected.
- It may take several seconds to project the images from the **USB TYPE B** port.

(continued on next page)

Selecting an input signal (continued)

COMPUTER button

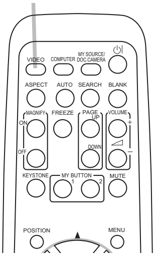


1. Press **COMPUTER** button on the remote control.
   Each time you press the button, the projector switches its input port from the current port as below.

   → COMPUTER IN1 → COMPUTER IN2 → LAN
   USB TYPE B ← USB TYPE A ←

- While ON is selected for AUTO SEARCH item in OPTION menu, the projector will keep checking every port sequentially till an input signal is detected (📖*54*). If **COMPUTER** button is pressed when **VIDEO**, **S-VIDEO**, **COMPONENT** or **HDMI** port is selected, the projector will check **COMPUTER IN1** port first.
- It may take several seconds to project the images from the **USB TYPE B** port.

VIDEO button

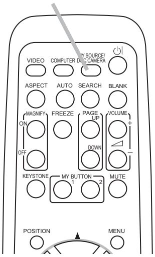


1. Press **VIDEO** button on the remote control.
   Each time you press the button, the projector switches its input port from the current port as below.

   → HDMI → COMPONENT → S-VIDEO → VIDEO

- While ON is selected for AUTO SEARCH item in OPTION menu, the projector will keep checking every port sequentially till an input signal is detected (📖*54*). If **VIDEO** button is pressed when **COMPUTER IN1** or **COMPUTER IN2** port is selected, the projector will check **HDMI** port first.

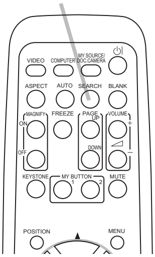
MY SOURCE /
DOC. CAMERA button



1. Press the **MY SOURCE / DOC. CAMERA** button on the remote control. The input signal will be changed into the signal you set as MY SOURCE (📖*58*).

- This function also can use for document camera. Select the input port that connected the document camera.

Searching an input signal



SEARCH button

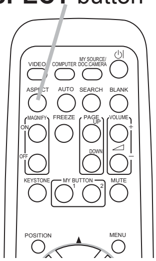
VIDEO
COMPUTER
MY SOURCE/ DOC.CAMERA
ASPECT
AUTO
SEARCH
BLANK
MAGNIFY
FREEZE
PAGE UP
VOLUME
ON
OFF
DOWN
KEYSTONE
MY BUTTON
1
2
MUTE
POSITION
MENU

1. Press **SEARCH** button on the remote control.
The projector will start to check its input ports as below in order to find any input signals.
When an input is found, the projector will stop searching and display the image. If no signal is found, the projector will return to the state selected before the operation.

→ COMPUTER IN1 → COMPUTER IN2 → LAN ↴
VIDEO USB TYPE A
↑ ↓
S-VIDEO USB TYPE B
↑ COMPONENT ← HDMI ←

- While ON is selected for AUTO SEARCH item in OPTION menu (📖***54***), the projector will keep checking the ports in above order repeatedly till an input signal is detected.
- It may take several seconds to project the images from the **USB TYPE B** port.

Selecting an aspect ratio



ASPECT button

VIDEO
COMPUTER
MY SOURCE/ DOC.CAMERA
ASPECT
AUTO
SEARCH
BLANK
MAGNIFY
FREEZE
PAGE UP
VOLUME
ON
OFF
DOWN
KEYSTONE
MY BUTTON
1
2
MUTE
POSITION
MENU

1. Press **ASPECT** button on the remote control.
Each time you press the button, the projector switches the mode for aspect ratio in turn.

❍ **For a computer signal**

CP-X4021N, CP-X5021N: NORMAL ↔ 4:3 ↔ 16:9 ↔ 16:10

CP-WX4021N: NORMAL↔ 4:3 ↔ 16:9 ↔ 16:10 ↔ NATIVE

❍ **For an HDMI signal**

CP-X4021N, CP-X5021N: NORMAL ↔ 4:3 ↔ 16:9 ↔ 16:10 ↔ 14:9

CP-WX4021N: NORMAL ↔ 4:3 ↔ 16:9 ↔ 16:10 ↔ 14:9 ↔ NATIVE

❍ **For a video signal, s-video signal or component video signal**

CP-X4021N, CP-X5021N:4:3 ↔ 16:9 ↔ 14:9

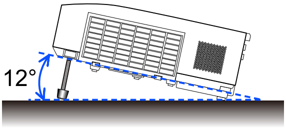
CP-WX4021N: 4:3 ↔ 16:9 ↔ 16:10 ↔ 14:9 ↔ NATIVE

❍ **For an input signal from the LAN, USB TYPE A or USB TYPE B port, or if there is no signal**

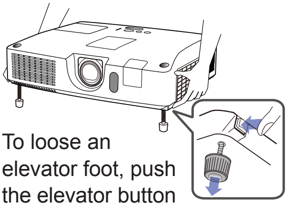
CP-X4021N, CP-X5021N: 4:3 (fixed)
CP-WX4021N: 16:10 (fixed)

- **ASPECT** button does not work when no proper signal is inputted.
- NORMAL mode keeps the original aspect ratio setting.

Adjusting the projector's elevator

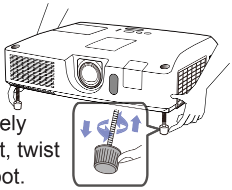


When the place to put the projector is slightly uneven to the left or right, use the elevator feet to place the projector horizontally.
Using the feet can also tilt the projector in order to project at a suitable angle to the screen, elevating the front side of the projector within 12 degrees.
This projector has 2 elevator feet and 2 elevator buttons. An elevator foot is adjustable while pushing the elevator button on the same side as it.



To loose an elevator foot, push the elevator button on the same side as it.

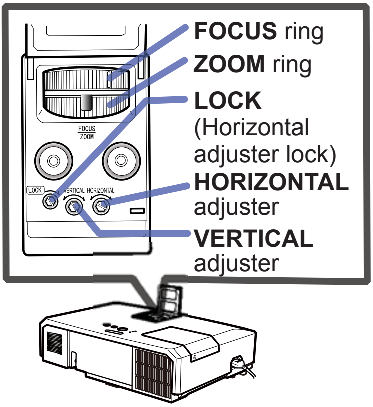
1. Holding the projector, push the elevator buttons to loose the elevator feet.
2. Position the front side of the projector to the desired height.
3. Release the elevator buttons in order to lock the elevator feet.
4. After making sure that the elevator feet are locked, put the projector down gently.
5. If necessary, the elevator feet can be manually twisted to make more precise adjustments. Hold the projector when twisting the feet.



To finely adjust, twist the foot.

⚠**CAUTION** ►Do not handle the elevator buttons without holding the projector, since the projector may drop down.
►Do not tilt the projector other than elevating its front within 12 degrees using the adjuster feet. A tilt of the projector exceeding the restriction could cause malfunction or shortening the lifetime of consumables, or the projector itself.

Adjusting the lens


FOCUS ring
ZOOM ring
LOCK
(Horizontal adjuster lock)
HORIZONTAL adjuster
VERTICAL adjuster
FOCUS
ZOOM
LOCK
VERTICAL
HORIZONTAL

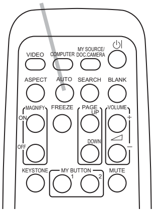
1. Use the **ZOOM** ring to adjust the screen size.
2. Use the **FOCUS** ring to focus the picture.
3. Turn the **VERTICAL** adjuster fully counter clockwise. Then turn it clockwise and adjust the vertical lens position upward.
4. Turn the **LOCK** counter clockwise to loosen the lock of the **HORIZONTAL** adjuster.
5. Turn the **HORIZONTAL** adjuster clockwise or counter clockwise to adjust the horizontal lens position.
6. Turn the **LOCK** fully clockwise to tighten it and lock the horizontal lens position.
7. Use the **FOCUS** ring to focus the picture.

⚠**CAUTION** ►Operate the lens adjusters gently as the lens may malfunction when subjected to shocks. It may need more strength to turn the adjusters near the adjustment limits. Be careful not to apply too much strength.

NOTE • Use a hexagon wrench to turn the **VERTICAL**, **HORIZONTAL** adjusters and **LOCK**. If you do not have a hexagon wrench, you can use a flathead screwdriver with more careful handling.

• Use the **LOCK** so that the lens does not shift from the adjusted horizontal lens position. Adjusting the vertical lens position may shift the horizontal lens position. This projector is not equipped with a lock for vertical lens position.

Using the automatic adjustment feature



AUTO button

1. Press **AUTO** button on the remote control.
Pressing this button performs the following.

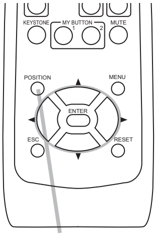
❍ **For a computer signal**
The vertical position, the horizontal position and the horizontal phase will be automatically adjusted.
Make sure that the application window is set to its maximum size prior to attempting to use this feature. A dark picture may still be incorrectly adjusted. Use a bright picture when adjusting.

❍ **For a video signal and s-video signal**
The video format best suited for the respective input signal will be selected automatically. This function is available only when the AUTO is selected for the VIDEO FORMAT item in the INPUT menu (📖*40*). The vertical position and horizontal position will be automatically set to the default.

❍ **For a component video signal**
The vertical position and horizontal position will be automatically set to the default. The horizontal phase will be automatically adjusted.

- The automatic adjustment operation requires approx. 10 seconds. Also please note that it may not function correctly with some input.
- When this function is performed for a video signal, a certain extra such as a line may appear outside a picture.
- When this function is performed for a computer signal, a black frame may be displayed on the edge of the screen, depending on the PC model.
- The items adjusted by this function may vary when the FINE or DISABLE is selected for the AUTO ADJUST item of the SERVICE item in the OPTION menu (📖*59*).

Adjusting the position



POSITION button

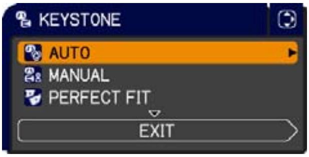
1. Press **POSITION** button on the remote control when no menu is indicated.
The “POSITION” indication will appear on the screen.

2. Use the ▲/▼/◄/► cursor buttons to adjust the picture position.
When you want to reset the operation, press **RESET** button on the remote control during the operation.
To complete this operation, press **POSITION** button again. Even if you do not do anything, the dialog will automatically disappear after a few seconds.

- When this function is performed on a video signal or an s-video signal, some image such as an extra-line may appear at outside of the picture.
- When this function is performed on a video signal or s-video signal, the range of this adjustment depends on OVER SCAN in IMAGE menu (📖*36*) setting. It is not possible to adjust when OVER SCAN is set to 10.
- If **POSITION** button is pressed when a menu is indicated on screen, the displayed picture does not move its position but the menu does.
- This function is unavailable for a signal from the **LAN**, **USB TYPE A**, **USB TYPE B** or **HDMI** port.

Correcting the distortion

To correct the distortion of projected screen, you can select one of three options, AUTO, MANUAL and PERFECT FIT.



AUTO: performs the automatic vertical keystone correction. (📖*43*)

MANUAL: allows you to adjust the vertical and horizontal keystone.

PERFECT FIT: allows you to adjust each of the screen corners and sides to correct the distortion.

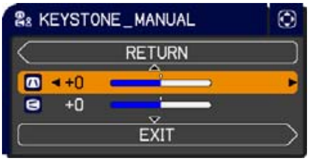
1. First press the **KEYSTONE** button to display the KEYSTONE menu, and point at one of items with the ▲/▼ buttons. Then follow the procedure shown below for the item you selected.

NOTE • The menu or dialog will automatically disappear after several seconds of inactivity. Pressing the **KEYSTONE** button again finishes the operation and closes the menu or dialog.
• When the screen is adjusted by PERFECT FIT, neither AUTO nor MANUAL is selectable. If you wish to use these functions, refer to step 3 in the PERFECT FIT item to initialize the adjustment of PERFECT FIT.
• When TRANSITION DETECTOR is ON, these functions are not available (📖*74*).

AUTO

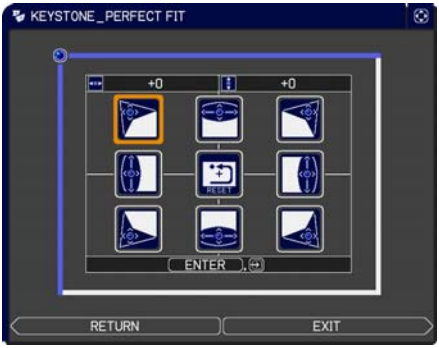
2. When AUTO is pointed at, pressing the ► or **ENTER** button performs automatic vertical keystone correction. To close the operation, press the **KEYSTONE** button, or pointed at the EXIT in the dialog with ▲/▼ buttons and press the ► or **ENTER** button.

MANUAL



2. When MANUAL is pointed at, pressing the ► or **ENTER** button displays the KYSTONE_MANUAL dialog.
3. Select the vertical or horizontal keystone (▣ / ▣) with the ▲/▼ buttons.
4. Use the ◄/► buttons to adjust the keystone distortion.
5. To close the operation, press the **KEYSTONE** button, or pointed at the EXIT in the dialog with ▲/▼ buttons and press the ► or **ENTER** button. Alternatively, point at RETURN in the dialog with the ▲/▼ buttons and press the ◄ or **ENTER** button to return to the menu in step 1.

PERFECT FIT



2. When PERFECT FIT is pointed at, pressing the ► or **ENTER** button displays the KEYSTONE_PERFECT FIT dialog.
3. If it is necessary to initialize the current adjustment, point at RESET in the dialog with the **RESET** button, and press the **ENTER** or **INPUT** button.
4. Select one of the corners or sides to be adjusted with the ▲/▼/◄/► buttons and press the **ENTER** or **INPUT** button.
5. Adjust the selected part as below.

- For adjusting a corner, use the ▲/▼/◄/► buttons to adjust the position of the corner.
- For adjusting the upper or lower side, use the ◄/► buttons to select any one point on the side, and use the ▲/▼ buttons to adjust the distortion of the side.
- For adjusting the left or right side, use the ▲/▼ buttons to select any one point on the side, and use the ◄/► buttons to adjust the distortion of the side.
- To adjust another corner or side press the **ENTER** or **INPUT** button and follow the procedure from step 4.

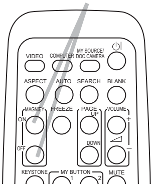
NOTE • Each corner and side can be adjusted individually but in some cases it may be adjusted in conjunction with another corner or side. This is due to control restrictions and not a malfunction.

6. To close the operation, press the **KEYSTONE** button, or point at EXIT in the dialog with ▲/▼ buttons and press the ► or **ENTER** button. Alternatively, point at RETURN in the dialog with the ▲/▼ buttons and press the ◄ or **ENTER** button to return to the menu in step 1.

Using the magnify feature

1. Press the **MAGNIFY ON** button on the remote control. The picture will be magnified, and the MAGNIFY dialog will appear on the screen. When the **MAGNIFY ON** button is pressed for the first time after the projector is turned on, the picture will be zoomed by 1.5 times. On the dialog, triangle marks to show each direction will be displayed.

MAGNIFY ON/OFF button



2. While the triangles are displayed on the dialog, use the ▲/▼/◄/► cursor buttons to shift the magnifying area.

3. A magnifying glass icon will be displayed on the dialog when the **MAGNIFY ON** button is pressed while the dialog with the triangles is displayed.

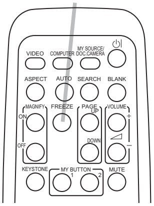
4. While the magnifying glass icon is displayed on the dialog, use the ▲/▼ cursor buttons to adjust the magnification ratio. The magnification ratio will be adjusted with fine steps. And changes in the ratio in single steps are subtle so they may be hard to recognize.

5. Press the **MAGNIFY OFF** button on the remote control to exit magnification.

- The MAGNIFY dialog will automatically disappear in several seconds with no operation. The dialog will appear again if the **MAGNIFY ON** button is pressed when the dialog has automatically disappeared.
- While the MAGNIFY dialog is displayed, press the **MAGNIFY ON** button to switch the dialog between magnifying area shifting (with the triangles) and magnification ratio adjustment (with the magnifying glass icon).
- The magnification is automatically disabled when the displaying signal or its display condition is changed.
- While the magnification is active, the keystone distortion condition may vary. It will be restored when the magnification is disabled.
- Some horizontal stripes might be visible on the image while magnification is active.
- This function is not available in the following cases:
  - The **USB TYPE A** port is selected as the input source.
  - A sync signal in the range not supported is input.
  - There is no input signal.

Temporarily freezing the screen

FREEZE button

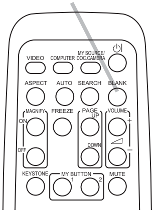

VIDEO
COMPUTER
MY SOURCE/ DOC.CAMERA
ASPECT
AUTO
SEARCH
BLANK
MAGNIFY
FREEZE
PAGE UP
VOLUME
ON
OFF
DOWN
KEYSTONE
MY BUTTON
1
2
MUTE

1. Press the **FREEZE** button on the remote control.
   The “FREEZE” indication will appear on the screen (however, the indication will not appear when the OFF is selected for the MESSAGE item in the SCREEN menu (📖*50*)), and the projector will go into the FREEZE mode, which the picture is frozen.
   To exit the FREEZE mode and restore the screen to normal, press the **FREEZE** button again.

- The projector automatically exits from the FREEZE mode when some control buttons are pressed.
- If the projector continues projecting a still image for a long time, the LCD panel might possibly be burned in. Do not leave the projector in the FREEZE mode for too long.
- Images might appear degraded when this function is operated, but it is not a malfunction.

Temporarily blanking the screen

BLANK button


VIDEO
COMPUTER
MY SOURCE/ DOC.CAMERA
ASPECT
AUTO
SEARCH
BLANK
MAGNIFY
FREEZE
PAGE UP
VOLUME
ON
OFF
DOWN
KEYSTONE
MY BUTTON
1
2
MUTE

1. Press **BLANK** button on the remote control.
   The BLANK screen will be displayed instead of the screen of input signal. Please refer to BLANK item in SCREEN menu (📖*48*).
   To exit from the BLANK screen and return to the input signal screen, press **BLANK** button again.

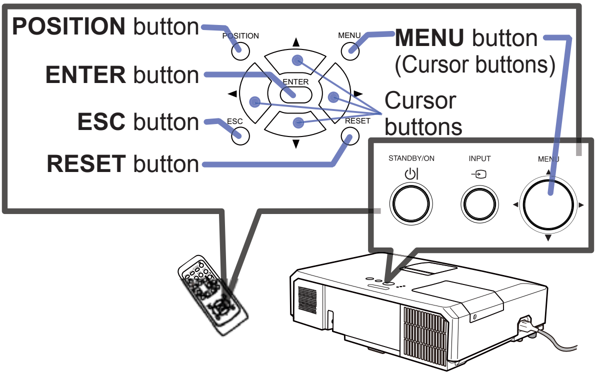
- The projector automatically exits from the BLANK mode when some control buttons are pressed.

⚠**CAUTION** ►If you wish to have a blank screen while the projector's lamp is on, use one of methods below.
- Use the supplied lens cover.
- Use the BLANK function above.
Taking any other action may cause the damage on the projector.

NOTE • The sound is not connected with the BLANK screen function. If necessary, set the volume or mute first. To display the BLANK screen and mute the sound at one time, use AV MUTE function (📖*19*).

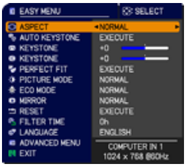
Using the menu function

This projector has the following menus:
PICTURE, IMAGE, INPUT, SETUP, AUDIO, SCREEN, OPTION, NETWORK, SECURITY and EASY MENU.
EASY MENU consists of functions often used, and the other menus are classified into each purpose and brought together as the ADVANCED MENU.
Each of these menus is operated using the same methods. While the projector is displaying any menu, the **MENU** button on the projector works as the cursor buttons. The basic operations of these menus are as follows.



1. To start the MENU, press the **MENU** button. The MENU you last used (EASY or ADVANCED) will appear. EASY MENU has priority to appear just after powered on.

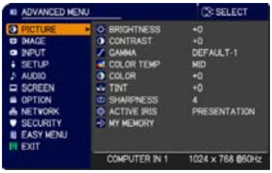
2. **In the EASY MENU**



EASY MENU　SELECT
ASPECT　NORMAL
AUTO KEYSTONE　EXECUTE
KEYSTONE　+0
KEYSTONE　+0
PERFECT FIT　EXECUTE
PICTURE MODE　NORMAL
ECO MODE　NORMAL
MIRROR　NORMAL
RESET　EXECUTE
FILTER TIME　0h
LANGUAGE　ENGLISH
ADVANCED MENU
EXIT
COMPUTER IN 1
1024 x 768 @60Hz

(1) Use the ▲/▼ cursor buttons to select an item to operate. If you want to change it to the ADVANCED MENU, select the ADVANCED MENU.
(2) Use the ◄/► cursor buttons to operate the item.

In the ADVANCED MENU



ADVANCED MENU　SELECT
PICTURE
IMAGE
INPUT
SETUP
AUDIO
SCREEN
OPTION
NETWORK
SECURITY
EASY MENU
EXIT
BRIGHTNESS　+0
CONTRAST　+0
GAMMA　DEFAULT-1
COLOR TEMP　MID
COLOR　+0
TINT　+0
SHARPNESS　4
ACTIVE IRIS　PRESENTATION
MY MEMORY
COMPUTER IN 1　1024 x 768 @60Hz

(1) Use the ▲/▼ cursor buttons to select a menu. If you want to change it to the EASY MENU, select the EASY MENU.
The items in the menu appear on the right side.
(2) Press the ► cursor button or **ENTER** button to move the cursor to the right side. Then use the ▲/▼ cursor buttons to select an item to operate and press the ► cursor button or **ENTER** button to progress. The operation menu or dialog of the selected item will appear.
(3) Use the buttons as instructed in the OSD to operate the item.

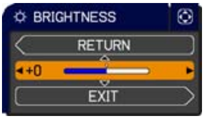
(continued on next page)

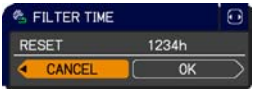
Using the menu function (continued)

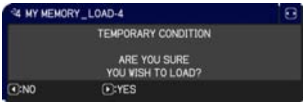
3. To close the MENU, press the **MENU** button again or select EXIT and press the ◄ cursor button or **ENTER** button. Even if you do not do anything, the dialog will automatically disappear after about 30 seconds.

- If you want to move the menu position, use the cursor buttons after pressing the **POSITION** button.
- Some functions cannot be performed when a certain input port is selected, or when a certain input signal is displayed.
- When you want to reset the operation, press **RESET** button on the remote control during the operation. Note that some items (ex. LANGUAGE, VOLUME) cannot be reset.
- In the ADVANCED MENU, when you want to return to the previous display, press the ◄ cursor button or **ESC** button on the remote control.

Indication in OSD (On Screen Display)







TEMPORARY CONDITION

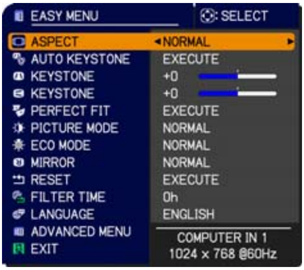
ARE YOU SURE YOU WISH TO LOAD?

The meanings of the general words on the OSD are as follows.

Indication	Meaning
EXIT	Selecting this word finishes the OSD menu. It's the same as pressing the **MENU** button.
RETURN	Selecting this word returns the menu to the previous menu.
CANCEL or NO	Selecting this word cancels the operation in the present menu and returns to the previous menu.
OK or YES	Selecting this word executes the prepared function or shifts the menu to the next menu.

EASY MENU

From the EASY MENU, items shown in the table below can be performed.
Select an item using the ▲/▼ cursor buttons. Then perform it according to the following table.



EASY MENU	SELECT
ASPECT	◄NORMAL ►
AUTO KEYSTONE	EXECUTE
KEYSTONE	+0
KEYSTONE	+0
PERFECT FIT	EXECUTE
PICTURE MODE	NORMAL
ECO MODE	NORMAL
MIRROR	NORMAL
RESET	EXECUTE
FILTER TIME	0h
LANGUAGE	ENGLISH
ADVANCED MENU	COMPUTER IN 1
EXIT	1024 x 768 @60Hz

Item	Description
ASPECT	Using the ◄/► buttons switches the mode for aspect ratio. See the ASPECT item in IMAGE menu (📖*36*).
AUTO KEYSTONE	Using the ► button executes the auto keystone function. See the AUTO KEYSTONE item in SETUP menu (📖*43*).
KEYSTONE	Using the ◄/► buttons corrects the vertical keystone distortion. See the KEYSTONE item in SETUP menu (📖*43*).
KEYSTONE	Using the ◄/► buttons corrects the horizontal keystone distortion. See the KEYSTONE in SETUP menu (📖*44*).
PERFECT FIT	Pressing the ► button displays the KEYSTONE_PERFECT FIT dialog. See the PERFECT FIT item in SETUP menu (📖*44*).
PICTURE MODE	Using the ◄/► buttons switches the picture mode. The picture modes are combinations of GAMMA and COLOR TEMP settings. Choose a suitable mode according to the projected source. → NORMAL ⇔ CINEMA ⇔ DYNAMIC ⇔ BOARD(BLACK) ← → DAYTIME ⇔ WHITEBOARD ⇔ BOARD(GREEN) ← • When the combination of GAMMA and COLOR TEMP differs from pre-assigned modes above, the display on the menu for the PICTURE MODE is “CUSTOM”. Please refer to the GAMMA and COLOR TEMP (📖*33, 34*) items in PICTURE menu. • Lines or other noise might appear on the screen when this function is operated, but it is not a malfunction.

	GAMMA	COLOR TEMP
NORMAL	1 DEFAULT	2 MID
CINEMA	2 DEFAULT	3 LOW
DYNAMIC	3 DEFAULT	1 HIGH
BOARD(BLACK)	4 DEFAULT	4 Hi-BRIGHT-1
BOARD(GREEN)	4 DEFAULT	5 Hi-BRIGHT-2
WHITEBOARD	5 DEFAULT	2 MID
DAYTIME	6 DEFAULT	6 Hi-BRIGHT-3

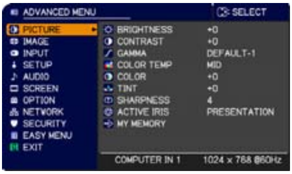
(continued on next page)

EASY MENU

Item	Description
ECO MODE	Using the ◄/► buttons turns off/on the Eco mode. See the ECO MODE item in SETUP menu (📖*44*).
MIRROR	Using the ◄/► buttons switches the mode for mirror status. See the MIRROR item in SETUP menu (📖*44*).
RESET	Performing this item resets all of the EASY MENU items except the FILTER TIME and LANGUAGE. A dialog is displayed for confirmation. Selecting the OK using the ► button performs resetting.
FILTER TIME	The usage time of the air filter is shown in the menu. Performing this item resets the filter time which counts usage time of the air filter. A dialog is displayed for confirmation. Selecting the OK using the ► button performs resetting. See the FILTER TIME item in OPTION menu (📖*56*).
LANGUAGE	Using the ◄/► buttons changes the display language. See the LANGUAGE item in SCREEN menu (📖*48*).
ADVANCED MENU	Press the ► or **ENTER** button to use the menu of PICTURE, IMAGE, INPUT, SETUP, AUDIO, SCREEN, OPTION, NETWORK or SECURITY.
EXIT	Press the ◄ or **ENTER** button to finish the OSD menu.

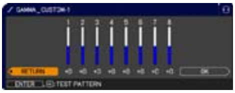
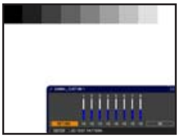
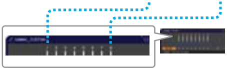
PICTURE menu

From the PICTURE menu, items shown in the table below can be performed.
Select an item using the ▲/▼ cursor buttons, and press the ► cursor button or **ENTER** button to execute the item. Then perform it according to the following table.

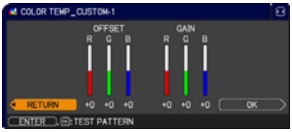
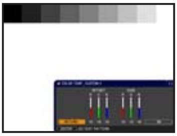


BRIGHTNESS +0
CONTRAST +0
GAMMA DEFAULT-1
COLOR TEMP MID
COLOR +0
TINT +0
SHARPNESS 4
ACTIVE IRIS PRESENTATION

COMPUTER IN 1 1024 x 768 @60Hz

Item	Description
BRIGHTNESS	Using the ◄/► buttons adjusts the brightness. Dark ⇔ Light
CONTRAST	Using the ◄/► buttons adjusts the contrast. Weak ⇔ Strong
GAMMA	Using the ▲/▼ buttons switches the gamma mode. 1 DEFAULT ⇔ 1 CUSTOM ⇔ 2 DEFAULT ⇔ 2 CUSTOM ⇔ 3 DEFAULT ⇳ ⇳ 6 CUSTOM 3 CUSTOM ⇳ ⇳ 6 DEFAULT ⇔ 5 CUSTOM ⇔ 5 DEFAULT ⇔ 4 CUSTOM ⇔ 4 DEFAULT **To adjust CUSTOM** Selecting a mode whose name includes CUSTOM and then pressing the ► button or the **ENTER** button displays a dialog to aid you in adjusting the mode. This function is useful when you want to change the brightness of particular tones.  Choose an item using the ◄/► buttons, and adjust the level using the ▲/▼ buttons. You can display a test pattern for checking the effect of your adjustment by pressing the **ENTER** button. Each time you press the **ENTER** button, the pattern changes as below.  No pattern ⇨ Gray scale of 9 steps Ramp ⇦ Gray scale of 15 steps The eight equalizing bars correspond to eight tone levels of the test pattern (Gray scale of 9 steps) except the darkest in the left end. If you want to adjust the 2nd tone from left end on the test pattern, use the equalizing adjustment bar "1". The darkest tone at the left end of the test pattern cannot be controlled with any of equalizing adjustment bar. • Lines or other noise might appear on the screen when this function is operated, but it is not a malfunction. 

(continued on next page)

Item	Description
COLOR TEMP	Using the ▲/▼ buttons switches the color temperature mode. 1 HIGH ⇔ 1 CUSTOM ⇔ 2 MID ⇔ 2 CUSTOM ⇕ ⇕ 6 CUSTOM 3 LOW ⇕ ⇕ 6 Hi-BRIGHT-3 3 CUSTOM ⇕ ⇕ 5 CUSTOM ⇔ 5 Hi-BRIGHT-2 ⇔ 4 CUSTOM ⇔ 4 Hi-BRIGHT-1 **To adjust CUSTOM** Selecting a mode whose name includes CUSTOM and then pressing the ► button or the **ENTER** button displays a dialog to aid you in adjusting the OFFSET and GAIN of the selected mode.  COLOR TEMP_CUSTOM-1 OFFSET GAIN R G B R G B RETURN +0 +0 +0 +0 +0 +0 OK ENTER, ⊕:TEST PATTERN OFFSET adjustments change the color intensity on the whole tones of the test pattern. GAIN adjustments mainly affect color intensity on the brighter tones of the test pattern. Choose an item using the ◄/► buttons, and adjust the level using the ▲/▼ buttons. You can display a test pattern for checking the effect of your adjustment by pressing the **ENTER** button. Each time you press the **ENTER** button, the pattern changes as below. No pattern ⇨ Gray scale of 9 steps Ramp ⇦ Gray scale of 15 steps  • Lines or other noise might appear on the screen when this function is operated, but it is not a malfunction.
COLOR	Using the ◄/► buttons adjusts the strength of whole color. Weak ⇔ Strong • This item can be selected only for a video, s-video and component video signal. • For an HDMI signal, this item can also be selected if either (1) or (2) applies. (1) HDMI FORMAT item in the INPUT menu is set to VIDEO. (2) HDMI FORMAT item in the INPUT menu is set to AUTO, and the projector recognizes that it receives video signals.
TINT	Using the ◄/► buttons adjusts the tint. Reddish ⇔ Greenish • This item can be selected only for a video, s-video and component video signal. • For an HDMI signal, this item can also be selected if either (1) or (2) applies. (1) HDMI FORMAT item in the INPUT menu is set to VIDEO. (2) HDMI FORMAT item in the INPUT menu is set to AUTO, and the projector recognizes that it receives video signals.

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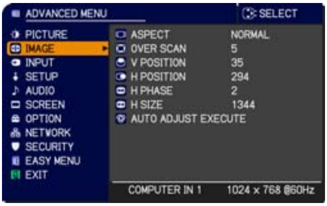
Item	Description
SHARPNESS	Using the ◄/► buttons adjusts the sharpness. Weak ⇔ Strong • There may be some noise and/or the screen may flicker for a moment when an adjustment is made. This is not a malfunction.
ACTIVE IRIS	Using the ▲/▼ cursor buttons changes the active iris control mode. PRESENTATION ⇔ THEATER ⇔ OFF PRESENTATION : The active iris displays the best presentation image for both bright and dark scenes. THEATER : The active iris displays the best theater image for both bright and dark scenes. OFF : The active iris is always open. • The screen may flicker when the PRESENTATION or THEATER modes are selected. If this occurs select OFF.
MY MEMORY	This projector has 4 memories for adjustment data (for all the items of the PICTURE menu). Selecting a function using the ▲/▼ buttons and pressing the ► or **ENTER** button performs each function. SAVE-1 ⇔ SAVE-2 ⇔ SAVE-3 ⇔ SAVE-4 LOAD-4 ⇔ LOAD-3 ⇔ LOAD-2 ⇔ LOAD-1 SAVE-1, SAVE-2, SAVE-3, SAVE-4 Performing a SAVE function saves the current adjustment data into the memory linked in the number included in the function's name. • Remember that the current data being stored of a memory will be lost by saving new data into the memory. LOAD-1, LOAD-2, LOAD-3, LOAD-4 Performing a LOAD function loads the data from the memory linked in the number included in the function's name, and adjusts the picture automatically depending on the data. • The LOAD functions whose linked memory has no data are skipped. • Remember that the current adjusted condition will be lost by loading data. If you want to keep the current adjustment, please save it before performing a LOAD function. • There may be some noise and the screen may flicker for a moment when loading data. This is not malfunction. • You can perform the LOAD function using **MY BUTTON**. Please see MY BUTTON item in OPTION menu (📖*57*).

IMAGE menu

From the IMAGE menu, items shown in the table below can be performed.
Select an item using the ▲/▼ cursor buttons, and press the ► cursor button or **ENTER** button to execute the item. Then perform it according to the following table.



ASPECT NORMAL
OVER SCAN 5
V POSITION 35
H POSITION 294
H PHASE 2
H SIZE 1344
COMPUTER IN 1 1024 x 768 @60Hz

Item	Description
ASPECT	Using the ▲/▼ buttons switches the mode for aspect ratio. **For a computer signal** CP-X4021N, CP-X5021N: NORMAL ⇔ 4:3 ⇔ 16:9 ⇔ 16:10 CP-WX4021N: NORMAL ⇔ 4:3 ⇔ 16:9 ⇔ 16:10 ⇔ NATIVE **For an HDMI signal** CP-X4021N, CP-X5021N: NORMAL ⇔ 4:3 ⇔ 16:9 ⇔ 16:10 ⇔ 14:9 CP-WX4021N: NORMAL ⇔ 4:3 ⇔ 16:9 ⇔ 16:10 ⇔ 14:9 ⇔ NATIVE **For a video signal, s-video signal or component video signal** CP-X4021, CP-X5021: 4:3 ⇔ 16:9 ⇔ 14:9 CP-WX4021: 4:3 ⇔ 16:9 ⇔ 16:10 ⇔ 14:9 ⇔ NATIVE **For an input signal from the LAN, USB TYPE A or USB TYPE B port, or if there is no signal** CP-X4021N, CP-X5021N: 4:3 (fixed) CP-WX4021N: 16:10 (fixed) • The NORMAL mode keeps the original aspect ratio of the signal.
OVER SCAN	Using the ◄/► buttons adjusts the over-scan ratio. Small (It magnifies picture) ⇔ Large (It reduces picture) • This item can be selected only for a video, s-video and component video signal. • For an HDMI signal, this item can also be selected if either (1) or (2) applies. (1) HDMI FORMAT item in the INPUT menu is set to VIDEO. (2) HDMI FORMAT item in the INPUT menu is set to AUTO, and the projector recognizes that it receives video signals.

(continued on next page)

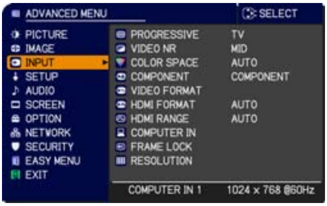
Item	Description
V POSITION	Using the ◄/► buttons adjusts the vertical position. Down ⇔ Up • Over-adjusting the vertical position may cause noise to appear on the screen. If this occurs, please reset the vertical position to the default setting. Pressing the **RESET** button when the V POSITION is selected will reset the V POSITION to the default setting. • When this function is performed on a video signal or an s-video signal, the range of this adjustment depends on OVER SCAN (📖*36*) setting. It is not possible to adjust when OVER SCAN is set to 10. • This function is unavailable for a signal from the **LAN**, **USB TYPE A**, **USB TYPE B** or **HDMI port**.
H POSITION	Using the ◄/► buttons adjusts the horizontal position. Right ⇔ Left • Over-adjusting the horizontal position may cause noise to appear on the screen. If this occurs, please reset the horizontal position to the default setting. Pressing the **RESET** button when the H POSITION is selected will reset the H POSITION to the default setting. • When this function is performed on a video signal or an s-video signal, the range of this adjustment depends on OVER SCAN (📖*36*) setting. It is not possible to adjust when OVER SCAN is set to 10. • This function is unavailable for a signal from the **LAN**, **USB TYPE A**, **USB TYPE B** or **HDMI** port.

(continued on next page)

Item	Description
H PHASE	Using the ◄/► buttons adjusts the horizontal phase to eliminate flicker. Right ⇔ Left • This item can be selected only for a computer signal or a component video signal. This function is unavailable for a signal from the **LAN**, **USB TYPE A**, **USB TYPE B** or **HDMI** port.
H SIZE	Using the ◄/► buttons adjusts the horizontal size. Small ⇔ Large • This item can be selected only for a computer signal. This function is unavailable for a signal from the **LAN**, **USB TYPE A**, **USB TYPE B** or **HDMI** port. • When this adjustment is excessive, the picture may not be displayed correctly. In such a case, please reset the adjustment by pressing the **RESET** button on the remote control during this operation. • Images might appear degraded when this function is operated, but it is not a malfunction.
AUTO ADJUST EXECUTE	Selecting this item performs the automatic adjustment feature. **For a computer signal** The vertical position, the horizontal position and the horizontal phase will be automatically adjusted. Make sure that the application window is set to its maximum size prior to attempting to use this feature. A dark picture may still be incorrectly adjusted. Use a bright picture when adjusting. **For a video signal and s-video signal** The video format best suited for the respective input signal will be selected automatically. This function is available only when the AUTO is selected for the VIDEO FORMAT item in the INPUT menu (📖*40*). The vertical position and horizontal position will be automatically set to the default. **For a component video signal** The vertical position and horizontal position will be automatically set to the default. The horizontal phase will be automatically adjusted. • The automatic adjustment operation requires approx. 10 seconds. Also please note that it may not function correctly with some input. • When this function is performed for a video signal, a certain extra such as a line may appear outside a picture. • When this function is performed for a computer signal, a black frame may be displayed on the edge of the screen, depending on the PC model. • The items adjusted by this function may vary when the FINE or DISABLE is selected for the AUTO ADJUST item of the SERVICE item in the OPTION menu (📖*59*).

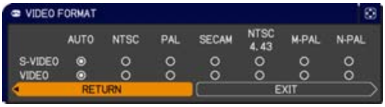
INPUT menu

From the INPUT menu, items shown in the table below can be performed.
Select an item using the ▲/▼ cursor buttons, and press the ► cursor button or **ENTER** button to execute the item. Then perform it according to the following table.


ADVANCED MENU
SELECT
PICTURE
IMAGE
INPUT
SETUP
AUDIO
SCREEN
OPTION
NETWORK
SECURITY
EASY MENU
EXIT
PROGRESSIVE TV
VIDEO NR MID
COLOR SPACE AUTO
COMPONENT COMPONENT
VIDEO FORMAT
HDMI FORMAT AUTO
HDMI RANGE AUTO
COMPUTER IN
FRAME LOCK
RESOLUTION
COMPUTER IN 1 1024 x 768 @60Hz

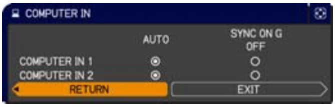
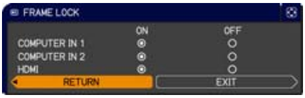
Item	Description
PROGRESSIVE	Using the ▲/▼ buttons switches the progress mode. TV ⇔ FILM ⇔ OFF • This function works only for a video signal, s-video signal, component video signal (of 480i@60 or 576i@50 or 1080i@50/60) and an HDMI signal (of 480i@60 or 576i@50 or 1080i@50/60). • When TV or FILM is selected, the screen image will be sharp. FILM adapts to the 2-3 Pull-Down conversion system. But these may cause a certain defect (for example, jagged line) of the picture for a quick moving object. In such a case, please select OFF, even though the screen image may lose sharpness.
VIDEO NR	Using the ▲/▼ buttons switches the noise reduction mode. HIGH ⇔ MID ⇔ LOW • This function works only for a video signal, s-video signal, component video signal (of 480i@60 or 576i@50 or 1080i@50/60) and an HDMI signal (of 480i@60 or 576i@50 or 1080i@50/60).
COLOR SPACE	Using the ▲/▼ buttons switches the mode for color space. AUTO ⇔ RGB ⇔ SMPTE240 ⇔ REC709 ⇔ REC601 • This item can be selected only for a computer signal (except for signals from the **LAN, USB TYPE A** and **USB TYPE B** ports) or a component video signal (except SCART RGB). • The AUTO mode automatically selects the optimum mode. • The AUTO operation may not work well at some signals. In such a case, it might be good to select a suitable mode except AUTO.
COMPONENT	Using the ▲/▼ buttons switches the function of the **COMPONENT** ports. COMPONENT ⇔ SCART RGB When the SCART RGB is selected, the **COMPONENT** (**Y, Cb/Pb, Cr/Pr)** and **VIDEO** ports will function as a SCART RGB port. A SCART adapter or SCART cable is required for a SCART RGB input to the projector. For details, contact your dealer.

(continued on next page)

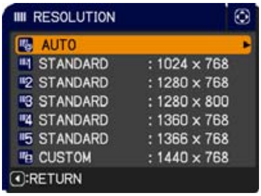
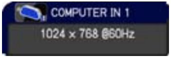
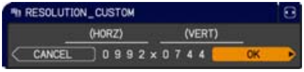
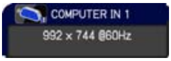
<table>
<tr><th>Item</th><th>Description</th></tr>
<tr><td>VIDEO FORMAT</td><td>
The video format for S-VIDEO port and VIDEO port can be set.
(1) Use the ▲/▼ buttons to select the input port.
(2) Using the ◄/► buttons switches the mode for video format.


AUTO ⇔ NTSC ⇔ PAL ⇔ SECAM
⇳ N-PAL ⇔ M-PAL ⇔ NTSC4.43 ⇳
• This item is performed only for a video signal from the VIDEO port or the S-VIDEO port.
• The AUTO mode automatically selects the optimum mode.
• The AUTO operation may not work well for some signals. If the picture becomes unstable (e.g. an irregular picture, lack of color), please select the mode according to the input signal.
</td></tr>
<tr><td>HDMI FORMAT</td><td>
Using the ▲/▼ cursor buttons switches the video format for an input from the HDMI port.
AUTO ⇔ VIDEO ⇔ COMPUTER
⇧______________⇧
<table>
<tr><th></th><th>Feature</th></tr>
<tr><td>AUTO</td><td>automatically sets the optimum mode.</td></tr>
<tr><td>VIDEO</td><td>sets the suitable mode for DVD signals.</td></tr>
<tr><td>COMPUTER</td><td>sets the suitable mode for computer signals.</td></tr>
</table>
• When the COMPUTER is selected, the functions COLOR (PICTURE menu), TINT (PICTURE menu) and OVER SCAN (IMAGE menu) are unavailable.
</td></tr>
<tr><td>HDMI RANGE</td><td>
Using the ▲/▼ cursor buttons changes the digital range for input from the HDMI port.
AUTO ⇔ NORMAL ⇔ ENHANCED
⇧______________⇧
<table>
<tr><th></th><th>Feature</th></tr>
<tr><td>AUTO</td><td>automatically sets the optimum mode.</td></tr>
<tr><td>NORMAL</td><td>sets the suitable mode for DVD signals. (16-235)</td></tr>
<tr><td>ENHANCED</td><td>sets the suitable mode for computer signals. (0-255)</td></tr>
</table>
• If the contrast of the screen image is too strong or too weak, try finding a more suitable mode.
</td></tr>
</table>

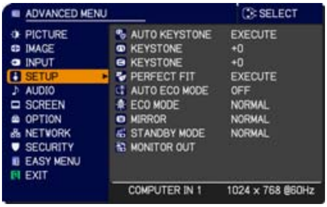
(continued on next page)

Item	Description
COMPUTER IN	The computer input signal type for **COMPUTER IN1** and **IN2** ports can be set. (1) Use the ▲/▼ buttons to select the **COMPUTER IN** port to be set. (2) Use the ◄/► buttons to select the computer input signal type. AUTO ⇔ SYNC ON G OFF  COMPUTER IN AUTO SYNC ON G OFF COMPUTER IN 1 ◉ ○ COMPUTER IN 2 ◉ ○ RETURN EXIT • Selecting the AUTO mode allows you to input a sync on G signal or component video signal from the port. Please refer to **Technical** for the connection of component video input to **COMPUTER IN1/2** port. • In the AUTO mode, the picture may be distorted with certain input signals. In such a case, remove the signal connector so that no signal is received and select the SYNC ON G OFF, and then reconnect the signal.
FRAME LOCK	Set the frame lock function on/off for each port. (1) Use the ▲/▼ buttons to select the input ports. (2) Use the ◄/► buttons to turn the frame lock function on/off . ON ⇔ OFF  FRAME LOCK ON OFF COMPUTER IN 1 ◉ ○ COMPUTER IN 2 ◉ ○ HDMI ◉ ○ RETURN EXIT • This item can be performed only on a signal with a vertical frequency of 49 to 51Hz, 59 to 61 Hz. • When ON is selected, moving pictures are displayed more smoothly.

(continued on next page)

Item	Description
RESOLUTION	The resolution for the **COMPUTER IN1** and **COMPUTER IN2** input signals can be set on this projector. (1) In the INPUT menu select the RESOLUTION using the ▲/▼ buttons and press the ► button. The RESOLUTION menu will be displayed.  RESOLUTION AUTO 1 STANDARD : 1024 x 768 2 STANDARD : 1280 x 768 3 STANDARD : 1280 x 800 4 STANDARD : 1360 x 768 5 STANDARD : 1366 x 768 CUSTOM : 1440 x 768 :RETURN (2) In the RESOLUTION menu select the resolution you wish to display using the ▲/▼ buttons. Selecting AUTO will set a resolution appropriate to the input signal. (3) Pressing the ► or **ENTER** button when selecting a STANDARD resolution will automatically adjust the horizontal and vertical positions, clock phase and horizontal size. The INPUT_INFORMATION dialog will be displayed. STANDARD ↓  COMPUTER IN 1 1024 x 768 @60Hz (4) To set a custom resolution use the ▲/▼ buttons to select the CUSTOM and the RESOLUTION_CUSTOM box will be displayed. Set the horizontal (HORZ) and vertical (VERT) resolutions using the ▲/▼/◄/► buttons. This function may not support all resolutions. CUSTOM ↓  RESOLUTION_CUSTOM (HORZ) (VERT) CANCEL 0 9 9 2 x 0 7 4 4 OK (5) Move the cursor to OK on screen and press the ► or **ENTER** button. The message "ARE YOU SURE YOU WISH TO CHANGE RESOLUTION?" appears. To save the setting, press the ► button. The horizontal and vertical positions, clock phase and horizontal size will be automatically adjusted. The INPUT_INFORMATION dialog will be displayed.  COMPUTER IN 1 992 x 744 @60Hz (6) To revert back to the previous resolution without saving changes, move the cursor to CANCEL on screen and press the ◄ or **ENTER** button. The screen will then return to the RESOLUTION menu displaying the previous resolution. • For some pictures, this function may not work well.

SETUP menu

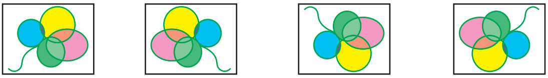


AUTO KEYSTONE EXECUTE
KEYSTONE +0
KEYSTONE +0
PERFECT FIT EXECUTE
AUTO ECO MODE OFF
ECO MODE NORMAL
MIRROR NORMAL
STANDBY MODE NORMAL
MONITOR OUT
COMPUTER IN 1 1024 x 768 @60Hz

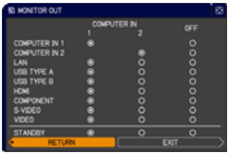
From the SETUP menu, items shown in the table below can be performed.
Select an item using the ▲/▼ cursor buttons, and press the ► cursor button or **ENTER** button to execute the item. Then perform it according to the following table.

Item	Description
AUTO KEYSTONE	Selecting this item performs the Automatic keystone distortion correction. Projector automatically corrects vertical keystone distortion due to the (forward/backward) setup angle by itself. This function will be executed only once when selected in the menu. When the slant of the projector is changed, execute this function again. • The adjustable range of this function will vary among inputs. For some input, this function may not work well. • When V:INVERT or H&V:INVERT is selected to the MIRROR item in the SETUP menu, if the projector screen is inclined or angled downward, this function may not work correctly. • When the zoom adjustment is set to the TELE (telephoto focus), this function may be excessive. This function should be used when the zoom adjustment is set to the full WIDE (wide-angle focus) whenever possible. • When the projector is placed on the level (about ±4°), this function may not work. • When the projector is inclined to near ±30 degree or over, this function may not work well. • This function is unavailable when the TRANSITION DETECTOR (📖*74*) is ON or the screen is adjusted by PERFECT FIT (📖*26*).
KEYSTONE	Using the ◄/► buttons corrects the vertical keystone distortion. Shrink the bottom of the image ⬄ Shrink the top of the image • The adjustable range of this function will vary among inputs. For some input, this function may not work well. • When the zoom adjustment is set to the TELE (telephoto focus), this function may be excessive. This function should be used when the zoom adjustment is set to the full WIDE (wide-angle focus) whenever possible. • This function is unavailable when the TRANSITION DETECTOR (📖*74*) is ON or the screen is adjusted by PERFECT FIT (📖*26*).

(continued on next page)

Item	Description
KEYSTONE	Using the ▲/▼ buttons corrects the vertical keystone distortion. Shrink the top of the image ⇔ Shrink the bottom of the image. • The adjustable range of this function will vary among inputs. For some input, this function may not work well. • When the horizontal lens shift is not set to the center, this function may not work well. • This function is unavailable when the TRANSITION DETECTOR (📖*74*) is ON or the screen is adjusted by PERFECT FIT (📖*26*).
PERFECT FIT	Selecting this item displays the KEYSTONE_PERFECT FIT dialog. For details, see PERFECT FIT in **Correcting the distortion** (📖*26*). • This is unavailable when the TRANSITION DETECTOR is ON (📖*74*).
AUTO ECO MODE	Using the ▲/▼ buttons turns on/off the AUTO ECO MODE. ON ⇔ OFF • When ON is selected, the projector will always be set to Eco mode at start-up regardless of the ECO MODE (📖***below***) setting. An OSD message “AUTO ECO MODE” will be displayed for tens of seconds when the projector starts with this function activated.
ECO MODE	Using the ▲/▼ buttons turns off/on the Eco mode. NORMAL ⇔ ECO • When the ECO is selected, acoustic noise and screen brightness are reduced. • When AUTO ECO MODE (📖***above***) is set to ON, the projector will always be set to Eco mode at start-up regardless this setting.
MIRROR	Using the ▲/▼ buttons switches the mode for mirror status.  NORMAL ⇔ H:INVERT ⇔ V:INVERT ⇔ H&V:INVERT If the Transition Detector is on and MIRROR status is changed, TRANSITION DETECTOR ON alarm (📖*74*) will be displayed when projector is restarted after the AC power is turned off.

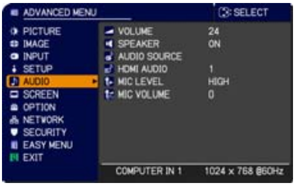
(continued on next page)

<table>
<tr><th>Item</th><th>Description</th></tr>
<tr><td>STANDBY MODE</td><td>Using ▲/▼ buttons switches the standby mode setting between NORMAL and SAVING.
NORMAL ⇔ SAVING
When SAVING is selected, the power consumption in the standby mode is lowered with some functional restriction as below:
• When SAVING is selected, the RS-232C communication control except to turn the projector on and the network function are disabled while the projector is in the standby mode. If the COMMUNICATION TYPE in the COMMUNICATION menu is set to NETWORK BRIDGE, all of the RS-232C commands are disabled (📖<i>61</i>).
• When SAVING is selected, STANDBY setting of AUDIO SOURCE (📖<i>46</i>) is invalid, and no signal is output from AUDIO OUT port in the standby mode.
• When SAVING is selected, STANDBY setting of MONITOR OUT is invalid, and no signal is output from MONITOR OUT port in the standby mode.</td></tr>
<tr><td>MONITOR OUT</td><td>While the image signal from the input port chosen in step (1) is projected, the image signal from the input port selected in step (2) is output to MONITOR OUT port.
(1) Choose a picture input port using ▲/▼ buttons.
Choose STANDBY to select the picture output in the standby mode.
(2) Select one of the COMPUTER IN ports using ◄/► buttons.
Select OFF to disable the MONITOR OUT port for the input port or standby mode chosen in the step (1).

MONITOR OUT
<table>
<tr><th></th><th>COMPUTER IN
1</th><th>
2</th><th>OFF</th></tr>
<tr><td>COMPUTER IN 1</td><td>●</td><td></td><td>○</td></tr>
<tr><td>COMPUTER IN 2</td><td></td><td>●</td><td>○</td></tr>
<tr><td>LAN</td><td>●</td><td>○</td><td>○</td></tr>
<tr><td>USB TYPE A</td><td>●</td><td>○</td><td>○</td></tr>
<tr><td>USB TYPE B</td><td>●</td><td>○</td><td>○</td></tr>
<tr><td>HDMI</td><td>●</td><td>○</td><td>○</td></tr>
<tr><td>COMPONENT</td><td>●</td><td>○</td><td>○</td></tr>
<tr><td>S-VIDEO</td><td>●</td><td>○</td><td>○</td></tr>
<tr><td>VIDEO</td><td>●</td><td>○</td><td>○</td></tr>
<tr><td>STANDBY</td><td>●</td><td>○</td><td>○</td></tr>
</table>

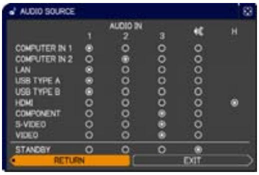
• You cannot select COMPUTER IN1 in step (1) and COMPUTER IN2 in step (2) and vice versa.</td></tr>
</table>

AUDIO menu

From the AUDIO menu, items shown in the table below can be performed. Select an item using the ▲/▼ cursor buttons, and press the ► cursor button or the **ENTER** button to execute the item. Then perform it according to the following table.


ADVANCED MENU
SELECT
PICTURE
IMAGE
INPUT
SETUP
AUDIO
SCREEN
OPTION
NETWORK
SECURITY
EASY MENU
EXIT
AUDIO SOURCE

VOLUME 24
SPEAKER ON
HDMI AUDIO 1
MIC LEVEL HIGH
MIC VOLUME 0
COMPUTER IN 1 1024 x 768 @60Hz

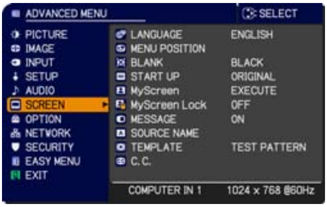
Item	Description
VOLUME	Using the ◄/► buttons adjusts the volume. Low ⇔ High
SPEAKER	Using the ▲/▼ buttons turns on/off the built-in speaker. ON ⇔ OFF When OFF is selected, the built-in speaker does not work.
AUDIO SOURCE	While the image signal from the input port chosen in step (1) is projected, the audio signal from the input port selected in step (2) is output to both the **AUDIO OUT** port and built-in speaker of this projector. However, the built-in speaker does not work when SPEAKER is set to OFF.  AUDIO SOURCE AUDIO IN 1 2 3 🔇 H COMPUTER IN 1 ● ○ ○ ○ COMPUTER IN 2 ○ ● ○ ○ LAN ● ○ ○ ○ USB TYPE A ● ○ ○ ○ USB TYPE B ● ○ ○ ○ HDMI ○ ○ ○ ○ ● COMPONENT ○ ○ ● ○ S-VIDEO ○ ○ ● ○ VIDEO ○ ○ ● ○ STANDBY ○ ○ ○ ● RETURN EXIT (1) Choose a picture input port using the ▲/▼ buttons. Choose STANDBY to select the sound output in the standby mode. (2) Select one of the **AUDIO IN** ports using ◄/► buttons. Select 🔇 to mute the sound from the input port or in the standby mode chosen in the step (1). • In the AUDIO SOURCE window, "H" symbolizes the audio signal from the **HDMI** port. It can be selected only for the picture input from the **HDMI** port. • Even if the projector is in the standby mode, cooling fans may work and make noises when the built-in speaker is in operation. • C.C. (Closed Caption) is automatically activated when 🔇 is selected and an input signal containing C.C. is received. This function is available only when the signal is NTSC for **VIDEO** or **S-VIDEO**, or 480i@60 for **COMPONENT**, **COMPUTER IN1** or **COMPUTER IN2**, and when AUTO is selected for DISPLAY in the C.C. menu under the SCREEN menu (📖*53*).

(continued on next page)

Item	Description
HDMI AUDIO	Using the ▲/▼ buttons switches the mode for the HDMI audio. Check each of the two modes provided and select the suitable one for your HDMI audio device. 1 ⇔ 2
MIC LEVEL	Using the ▲/▼ buttons switches the input level to match that of the microphone connected to the **MIC** port. HIGH ⇔ LOW HIGH: for a microphone with an amplifier. LOW: for a microphone without an amplifier.
MIC VOLUME	Using the ◄/► buttons adjusts the volume of the microphone connected to the **MIC** port. Low ⇔ High

SCREEN menu

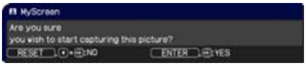
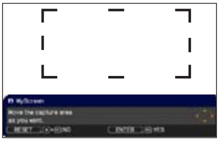
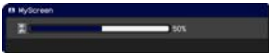
From the SCREEN menu, items shown in the table below can be performed.
Select an item using the ▲/▼ cursor buttons, and press the ► cursor button or **ENTER** button to execute the item. Then perform it according to the following table.



LANGUAGE ENGLISH
MENU POSITION
BLANK BLACK
START UP ORIGINAL
MyScreen EXECUTE
MyScreen Lock OFF
MESSAGE ON
SOURCE NAME
TEMPLATE TEST PATTERN
C.C.
COMPUTER IN 1 1024 x 768 @60Hz

Item	Description
LANGUAGE	Using the ▲/▼/◄/► buttons switches the OSD (On Screen Display) language. ENGLISH ⇔ FRANÇAIS ⇔ DEUTSCH ⇔ ESPAÑOL ...... (shown in the LANGUAGE dialog) ...... Press the **ENTER** or **INPUT** button to save the language setting.
MENU POSITION	Using the ▲/▼/◄/► buttons adjusts the menu position. To quit the operation, press the **MENU** button on the remote control or keep no operation for about 10 seconds.
BLANK	Using the ▲/▼ buttons switches the mode for the blank screen. The blank screen is a screen for the temporarily blanking feature (📖*28*). It is displayed by pressing the **BLANK** button on the remote control. MyScreen ⇔ ORIGINAL ⇔ BLUE ⇔ WHITE ⇔ BLACK MyScreen : Screen can be registered by the MyScreen item (📖*49*). ORIGINAL : Screen preset as the standard screen. BLUE, WHITE, BLACK : Plain screens in each color. • To avoid remaining as an afterimage, the MyScreen or ORIGINAL screen will change to the plain black screen after several minutes.
START UP	Using the ▲/▼ buttons switches the mode for the start-up screen. The start-up screen is a screen displayed when no signal or an unsuitable signal is detected. MyScreen ⇔ ORIGINAL ⇔ OFF MyScreen : Screen can be registered by the MyScreen item (📖*49*). ORIGINAL : Screen preset as the standard screen. OFF : Plain black screen. • To avoid remaining as an afterimage, the MyScreen or ORIGINAL screen will change to the BLANK screen (📖***above***) after several minutes. If also the BLANK screen is the MyScreen or ORIGINAL, the plain black screen is instead used. • When the ON is selected to the MyScreen PASSWORD item in the SECURITY menu (📖*72*), the START UP is fixed to MyScreen.

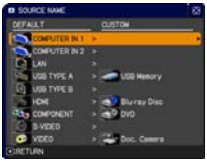
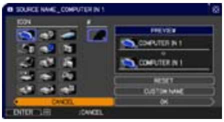
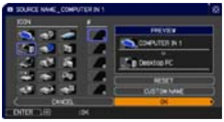
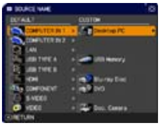
(continued on next page)

Item	Description
MyScreen	This item allows you to capture an image for use as a MyScreen image which can be used as the BLANK screen and START UP screen. Display the image you want to capture before executing the following procedure. 1. Selecting this item displays a dialog titled “MyScreen”. It will ask you if you start capturing an image from the current screen.  Are you sure you wish to start capturing this picture? Please wait for the target image to be displayed, and press the **ENTER** or **INPUT** button when the image is displayed. The image will freeze and the frame for capturing will appear. To stop performing, press the **RESET** button on the remote control. 2. Using the ▲/▼/◄/► buttons adjusts the frame position.  Move the capture area as you want. Please move the frame to the position of the image which you want to use. The frame may not be able to be moved for some input signals. To start registration, press the **ENTER** or **INPUT** button on the remote control.  To restore the screen and return to the previous dialog, press the **RESET** button on the remote control. Registration takes several minutes. When the registration is completed, the registered screen and the following message is displayed for several seconds: **“MyScreen registration is finished.”** If the registration failed, the following message is displayed: **“A capturing error has occurred. Please try again.”** • This function cannot be selected when the ON is selected to the MyScreen Lock item (📖*50*). • This function cannot be selected when the ON is selected to the MyScreen PASSWORD item in SECURITY menu (📖*72*). • This function is unavailable for a signal from the **LAN, USB TYPE A**, **USB TYPE B** or **HDMI** port.

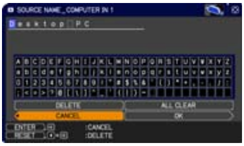
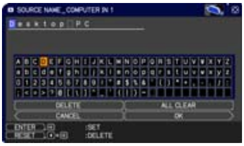
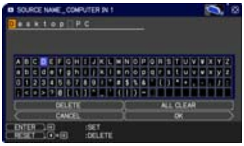
(continued on next page)

Item	Description
MyScreen Lock	Using the ▲/▼ buttons turns on/off the MyScreen lock function. ON ⇔ OFF When the ON is selected, the item MyScreen is locked. Use this function for protecting the current MyScreen. • This function cannot be selected when the ON is selected to the MyScreen PASSWORD item in SECURITY menu (📖*72*).
MESSAGE	Using the ▲/▼ buttons turns on/off the message function. ON ⇔ OFF When the ON is selected, the following message function works. "AUTO IN PROGRESS" while automatically adjusting "NO INPUT IS DETECTED" "SYNC IS OUT OF RANGE" "INVALID SCAN FREQ." "Searching…." while searching for the input "Detecting…." while an input signal is detected "AUTO ECO MODE" while starting up with AUTO ECO MODE The indication of the input signal displayed by changing The indication of the aspect ratio displayed by changing The indication of the PICTURE MODE displayed by changing The indication of the ACTIVE IRIS displayed by changing The indication of the MY MEMORY displayed by changing The indication of "FREEZE" and "II" while freezing the screen by pressing the **FREEZE** button. The indication of the TEMPLATE displayed by changing. • When the OFF is selected, please remember if the picture is frozen. Do not mistake freezing for a malfunction (📖*28*).

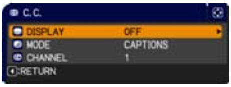
(continued on next page)

Item	Description
SOURCE NAME	Each input port for this projector can have a name applied to it. (1) Use the ▲/▼ buttons on the SCREEN menu to select SOURCE NAME and press the ► or **ENTER** button. The SOURCE NAME menu will be displayed. (2) Use the ▲/▼ buttons on the SOURCE NAME menu to select the port to be named and press the ► button. The SOURCE NAME dialog will be displayed. Right side of the menu is blank until a name is specified.  SOURCE NAME DEFAULT CUSTOM COMPUTER IN 1 COMPUTER IN 2 LAN USB TYPE A USB TYPE B HDMI COMPONENT S-VIDEO VIDEO USB Memory Blu-ray Disc DVD Doc. Camera RETURN (3) Select an icon you'd like to assign to the port in the SOURCE NAME dialog. The name assigned to the port will also be automatically switched according to your icon selection. Press the ► or **ENTER** button to determine your icon selection.  SOURCE NAME_COMPUTER IN 1 ICON PREVIEW COMPUTER IN 1 RESET CUSTOM NAME CANCEL OK ENTER CANCEL  SOURCE NAME_COMPUTER IN 1 ICON PREVIEW COMPUTER IN 1 Desktop PC RESET CUSTOM NAME CANCEL OK ENTER OK (4) Select a number you'd like to assign to the port along with the icon. You can select the number either from blank (no number assigned), 1, 2, 3, or 4. (5) If you'd like to modify the name assigned to the port, select CUSTOM NAME and press the ► button.  SOURCE NAME DEFAULT CUSTOM COMPUTER IN 1 Desktop PC COMPUTER IN 2 LAN USB TYPE A USB TYPE B HDMI COMPONENT S-VIDEO VIDEO USB Memory Blu-ray Disc DVD Doc. Camera RETURN

(continued on next page)

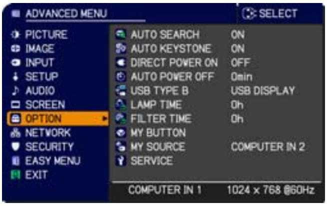
Item	Description
SOURCE NAME (**Continued**)	 SOURCE NAME_COMPUTER IN 1 Desktop PC DELETE ALL CLEAR CANCEL OK ENTER :CANCEL RESET :DELETE  SOURCE NAME_COMPUTER IN 1 Desktop PC DELETE ALL CLEAR CANCEL OK ENTER :SET RESET :DELETE  SOURCE NAME_COMPUTER IN 1 Desktop PC DELETE ALL CLEAR CANCEL OK ENTER :SET RESET :DELETE (6) The current name will be displayed on the first line. Use the ▲/▼/◄/► buttons and the **ENTER** or **INPUT** button to select and enter characters. To erase 1 character at one time, press the **RESET** button or press the ◄ and **INPUT** button at the same time. Also if you move the cursor to DELETE or ALL CLEAR on screen and press the **ENTER** or **INPUT** button, 1 character or all characters will be erased. The name can be a maximum of 16 characters. (7) To change an already inserted character, press the ▲ button to move the cursor to the first line, and use the ◄/► buttons to move the cursor on the character to be changed. After pressing the **ENTER** or **INPUT** button, the character is selected. Then, follow the same procedure as described at the item (6) above. (8) To finish entering text, move the cursor to the OK on screen and press the ►, **ENTER** or **INPUT** button. To revert to the previous name without saving changes, move the cursor to the CANCEL on screen and press the ◄, **ENTER** or **INPUT** button.
TEMPLATE	Using the ▲/▼ cursor buttons switches the mode for the template screen. Press the ► cursor (or the **ENTER**) button to display the selected template, and press the ◄ cursor button to close the displayed screen. The last selected template is displayed when the **MY BUTTON** allocated to the TEMPLATE function is pressed (📖*58*). TEST PATTERN ⇔ DOT-LINE1 ⇔ DOT-LINE2 ⇔ DOT-LINE3 ⇳ ⇳ STACK ⇔ MAP2 ⇔ MAP1 ⇔ CIRCLE2 ⇔ CIRCLE1 ⇔ DOT-LINE4 You can turn a map upside down and scroll it horizontally when MAP1 or MAP2 is selected. To invert or scroll the map, display the guidance by pressing the **RESET** button on the remote three seconds or more when MAP1 or MAP2 appears.

(continued on next page)

Item	Description
C.C. (Closed Caption)	 C.C. DISPLAY OFF MODE CAPTIONS CHANNEL 1 :RETURN The C.C. is the function that displays a transcript or dialog of the audio portion of a video, files or other presentation or other relevant sounds. It is required to have NTSC format video or 480i@60 format component video source supporting C.C. feature to utilize this function. It may not work properly, depending on equipment or signal source. In this case, please turn off the Closed Caption.
	DISPLAY Select Closed Caption DISPLAY setting from following options using ▲/▼ buttons. AUTO ⇔ ON ⇔ OFF AUTO : Closed Caption automatically displays when the volume is muted. ON : Closed Caption is on. OFF : Closed Caption is off. • The caption is not displayed when the OSD menu is active. • The Closed Caption is the function to display the dialogue, narration, and / or sound effects of a television program or other video sources. The Closed Caption availability is depending upon broadcaster and/or content.
	MODE Select Closed Caption MODE setting from following options using ▲/▼ buttons. CAPTIONS ⇔ TEXT CAPTIONS : Display Closed Caption. TEXT : Display Text data, which is for additional information such as news reports or a TV program guide. The information covers the entire screen. Not all of the C.C. program has Text information.
	CHANNEL Select Closed Caption CHANNEL from following options using ▲/▼ buttons. 1 ⇔ 2 ⇔ 3 ⇔ 4 1: Channel 1, primary channel / language 2: Channel 2 3: Channel 3 4: Channel 4 The channel data may vary, depending on the content. Some channel might be used for secondary language or empty.

OPTION menu

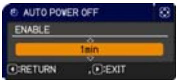
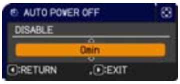
From the OPTION menu, items shown in the table below can be performed.
Select an item using the ▲/▼ cursor buttons, and press the ► cursor button or **ENTER** button to execute the item, except for the items LAMP TIME and FILTER TIME. Then perform it according to the following table.



AUTO SEARCH ON
AUTO KEYSTONE ON
DIRECT POWER ON OFF
AUTO POWER OFF 0min
USB TYPE B USB DISPLAY
LAMP TIME 0h
FILTER TIME 0h
MY BUTTON
MY SOURCE COMPUTER IN 2
SERVICE
COMPUTER IN 1 1024 x 768 @60Hz

Item	Description
AUTO SEARCH	Using the ▲/▼ buttons turns on/off the automatic signal search function. ON ⇔ OFF When the ON is selected, detecting no signal automatically cycles through input ports in the following order. The search is started from the current port. Then when an input is found, the projector will stop searching and display the image. ⇨ COMPUTER IN1 ⇨ COMPUTER IN2 ⇨ LAN ⇨ USB TYPE A VIDEO ⇦ S-VIDEO ⇦ COMPONENT ⇦ HDMI⇦ USB TYPE B ⇦ • It may take several seconds to project the images from the **USB TYPE B** port.
AUTO KEYSTONE	Using the ▲/▼ buttons turns on/off the automatic keystone function. ON ⇔ OFF ON : Automatic keystone distortion correction will be executed whenever changing the slant of the projector. OFF : This function is disabled. Please execute the AUTO KEYSTONE (EXECUTE) in the SETUP menu for automatic keystone distortion correction. • When the projector is suspended from the ceiling this feature will not function properly so select the OFF. • This function will be unavailable when the Transition Detector is on (📖*74*).
DIRECT POWER ON	Using the ▲/▼ buttons turns on/off the DIRECT POWER ON function. ON ⇔ OFF When set to the ON, the lamp in projector will be automatically turned on without the usual procedure (📖*18*), only when the projector is supplied with the power after the power was cut while the lamp was on. • This function does not work as long as the power has been supplied to the projector while the lamp is off. • After turning the lamp on by the DIRECT POWER ON function, if neither input nor operation is detected for about 30 minutes, the projector is turned off, even though the AUTO POWER OFF function (📖*55*) is disabled.

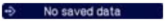
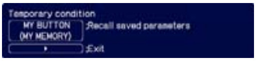
(continued on next page)

Item	Description
AUTO POWER OFF	Using the ▲/▼ buttons adjusts the time to count down to automatically turn the projector off. Long (max. 99 minutes) ⇔ Short (min. 0 minute = DISABLE)   When the time is set to 0, the projector is not turned off automatically. When the time is set to 1 to 99, and when the passed time with no-signal or an unsuitable signal reaches at the set time, the projector lamp will be turned off. If one of the projector's buttons or the remote control buttons is pressed or one of the commands (except get commands) is transmitted to the **CONTROL** port during the corresponding time, projector will not be turned off. Please refer to the section **Turning off the power** (📖*18*).
USB TYPE B	Using the ▲/▼ buttons selects the function of **USB TYPE B** port. To use this function, you need to connect the **USB TYPE B** port of the projector and the type A USB port of a computer. MOUSE ⇔ USB DISPLAY MOUSE : The accessory remote control works as the simple mouse and keyboard of the computer. USB DISPLAY : The port works as an input port that receives image signals from the computer (📖*86*). • It may take several seconds to project the images from the **USB TYPE B** port. • In the following cases, a message to notify you that **USB TYPE B** port is not available for picture input appears together with the USB TYPE B dialog: - This setting is switched to MOUSE while a picture input from the **USB TYPE B** port is projected. - The **USB TYPE B** port is selected as the picture input source while this setting is set to MOUSE. Select USB DISPLAY in the dialog to project the picture input to the **USB TYPE B** port. In this case, you cannot use the simple mouse and keyboard function. Otherwise select other port for picture input.

(continued on next page)

Item	Description
LAMP TIME	The lamp time is the usage time of the lamp, counted after the last resetting. It is shown in the OPTION menu. Pressing the **RESET** button on the remote control or the ► button of the projector displays a dialog. To reset the lamp time, select the OK using the ► button. CANCEL ⇨ OK • Please reset the lamp time only when you have replaced the lamp, for a suitable indication about the lamp. • For the lamp replacement, see the section **Replacing the lamp** (📖*89*).
FILTER TIME	The filter time is the usage time of the air filter, counted after the last resetting. It is shown in the OPTION menu. Pressing the **RESET** button on the remote control or the ► button of the projector displays a dialog. To reset the filter time, select the OK using the ► button. CANCEL ⇨ OK • Please reset the filter time only when you have cleaned or replaced the air filter, for a suitable indication about the air filter. • For the air filter cleaning, see the section **Cleaning and replacing the air filter** (📖*91*).

(continued on next page)

Item	Description
MY BUTTON	This item is to assign one of the following functions to **MY BUTTON 1/2** on the remote control (📖*6*). (1) Use the ▲/▼ buttons on the MY BUTTON menu to select a MY BUTTON - (1/2) and press the ► or **ENTER** button to display the MY BUTTON setup dialog. (2) Then using the ▲/▼/◄/► buttons sets one of the following functions to the chosen button. Press the **ENTER** or **INPUT** button to save the setting. • LAN: Selects input from **LAN** port. • USB TYPE A: Selects input from **USB TYPE A** port. • USB TYPE B: Selects input from **USB TYPE B** port. • HDMI: Selects input from **HDMI** port. • COMPUTER IN1: Selects the input from **COMPUTER IN1** port. • COMPUTER IN2: Selects the input from **COMPUTER IN2** port. • COMPONENT: Selects the input from **COMPONENT** ports. • S-VIDEO: Selects the input from **S-VIDEO** port. • VIDEO: Selects the input from **VIDEO** port. • SLIDESHOW: Selects the input from USB TYPE A, and starts a Slideshow. • MY IMAGE: Displays the MY IMAGE menu (📖*67*). • MESSENGER: Turns the messenger text displayed on the screen on/off (📖**Messenger Function** in the **User's Manual - Network Guide**). When there is no transferred text data to display, the message ”NO MESSENGER DATA" appears. • INFORMATION: Displays SYSTEM_INFORMATION, INPUT_INFORMATION (📖*63*), NETWORK_INFORMATION (📖*70*) or nothing. • AUTO KEYSTONE : Performs automatic keystone distortion correction (📖*43*). • MY MEMORY: Loads one of adjustment data stored (📖*35*). When more than one data are saved, the adjustment changes every time the **MY BUTTON** is pressed. When no data is saved in memory, the dialog "No saved data" appears.  No saved data When the current adjustment is not saved to memory, the dialog as shown in the right appears.  Temporary condition MY BUTTON (MY MEMORY) ;Recall saved parameters ► ;Exit If you want to keep the current adjustment, please press the ► button to exit. Otherwise loading a data will overwrite the current adjusted condition.

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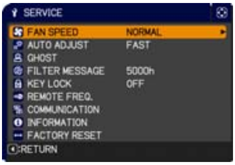
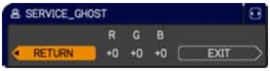
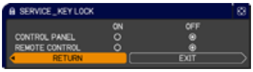
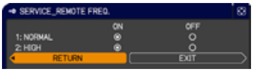
Item	Description
MY BUTTON (Continued)	• ACTIVE IRIS: Changes the active iris mode. • PICTURE MODE: Changes the PICTURE MODE (📖*31*). • FILTER RESET: Displays the filter time reset confirmation dialogue (📖*56*). • TEMPLATE: Makes the template pattern selected to the TEMPLATE item (📖*52*) appear or disappear. • AV MUTE: Turns the picture and audio on/off. • RESOLUTION: Turns on/off the RESOLUTION dialog (📖*42*). • MIC VOLUME: Turns on/off the MIC VOLUME dialog (📖*47*). • ECO MODE: Turns on/off the ECO MODE dialog (📖*44*).
MY SOURCE	Using ▲/▼ buttons selects the picture input port to be selected with pressing the **MY SOURCE/DOC.CAMERA** button on the remote control. You can use this function not only for document cameras but also computers and other equipment. →COMPUTER IN1 ⇔ COMPUTER IN2 ⇔ LAN ⇔ USB TYPE A ← →VIDEO⇔S-VIDEO ⇔ COMPONENT ⇔ HDMI ⇔ USB TYPE B←

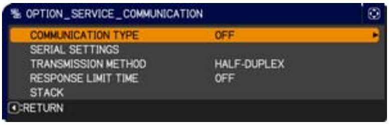
(continued on next page)

Item	Description
SERVICE	Selecting this item displays the SERVICE menu. Select an item using the ▲/▼ buttons, and press the ► button or the **ENTER** button on the remote control to execute the item.  SERVICE FAN SPEED NORMAL AUTO ADJUST FAST GHOST FILTER MESSAGE 5000h KEY LOCK OFF REMOTE FREQ. COMMUNICATION INFORMATION FACTORY RESET :RETURN
	FAN SPEED Using the ▲/▼ buttons switches the rotation speed of the cooling fans. The HIGH is the mode for use at highlands etc. Note that the projector is noisier when the HIGH is selected. HIGH ⇔ NORMAL
	AUTO ADJUST Using the ▲/▼ buttons to select one of the mode. When the DISABLE is selected, the automatic adjustment feature is disabled. FINE ⇔ FAST ⇔ DISABLE ⇧――――――――――⇧ FINE: Finer tuning including H.SIZE adjustment. FAST: Faster tuning, setting H.SIZE to prearranged data for the input signal. • Depending on conditions, such as input image, signal cable to the projector, environment around the projector, etc., the automatic adjustment may not work correctly. In such a case, please choose DISABLE to disable the automatic adjustment, and make adjustment manually.
	GHOST 1. Select a color element of ghost using the ◄/► buttons. 2. Adjust the selected element using the ▲/▼ buttons to disappear ghost.  SERVICE_GHOST R +0 G +0 B +0 RETURN EXIT
	FILTER MESSAGE Use the ▲/▼ button to set the timer for notifying by the message when to replace the filter unit 100h ⇔ 200h ⇔ 500h ⇔ 1000h ⇔ 2000h ⇔ 5000h ⇔ OFF After choosing an item except OFF, the message "REMINDER *** HRS PASSED ...." will appear after the timer reaches the interval time set by this feature (📖*96*). When the OFF is chosen, the message will not appear. Utilize this feature to keep the air filter clean, setting the suitable time according to your environment of this projector. • Please take care of the filter unit periodically, even if there is no message. If the air filter becomes to be blocked by dust or other matter, the internal temperature will rise, which could cause malfunction, or reduce the lifetime of the projector. • Please be careful with the operating environment of the projector and the condition of the filter unit.

(continued on next page)

<table>
<tr><th>Item</th><th colspan="2">Description</th></tr>
<tr><td rowspan="3">SERVICE
(continued)</td><td colspan="2">KEY LOCK
(1) Use the ▲/▼ buttons to choose the operations control.
CONTROL PANEL ⇔ REMOTE CONTROL
(2) Use the ◄/► buttons to select ON or OFF.
ON ⇔ OFF

SERVICE_KEY LOCK
ON OFF
CONTROL PANEL ○ ●
REMOTE CONTROL ○ ●

Selecting ON in Step 2 locks the buttons except STANDBY/ON on the operations control selected in Step 1. Selecting OFF releases the locked buttons on the operations control selected in Step 1.
• Please use this function to prevent tampering or accidental operation. This function does not have any effect on the remote control.</td></tr>
<tr><td colspan="2">REMOTE FREQ.
(1) Use the ▲/▼ button to change the projector's remote sensor frequency setting (📖<i>4, 17</i>).
1:NORMAL ⇔ 2:HIGH

SERVICE_REMOTE FREQ.
ON OFF
1: NORMAL ● ○
2: HIGH ● ○

(2) Use the ◄/► button to change the projector's remote sensor on or off.
ON ⇔ OFF
The factory default setting is for both 1:NORMAL and 2:HIGH to be on. If the remote control does not function correctly, disable either of them.
It's not possible to disable both options at the same time.</td></tr>
<tr><td>COMMUNICATION</td><td>Selecting this item displays COMMUNICATION menu.
In this menu, you can configure the serial communication settings of the projector using the CONTROL port.

OPTION_SERVICE_COMMUNICATION
COMMUNICATION TYPE OFF
SERIAL SETTINGS
TRANSMISSION METHOD HALF-DUPLEX
RESPONSE LIMIT TIME OFF
STACK

• Select an item using the cursor buttons ▲/▼. Then pressing the ► button opens the submenu for the setting item you selected. Or, pressing the ◄ button instead of the ► button makes the menu back to the previous one without changing the setup. Each submenu can be operated as described above.
• When COMMUNICATION TYPE (📖<i>61</i>) is set to OFF, the other items in COMMUNICATION menu are invalid.
• For the function of serial communication, refer to the User's Manual - Network Guide.</td></tr>
</table>

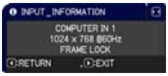
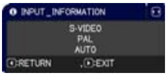
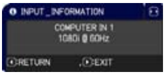
(continued on next page)

Item	Description	
SERVICE (continued)	**COMMUNICATION (continued)**	**COMMUNICATION TYPE** Select the communication type for transmission via the **CONTROL** port. NETWORK BRIDGE ⇔ OFF NETWORK BRIDGE: Select this type, if it is required to control an external device as a network terminal, via this projector from the computer. The **CONTROL** port doesn't accept RS-232C commands (📖**Network Bridge Function** in the **User's Manual - Network Guide**) OFF: Select this mode to receive RS-232C commands using the **CONTROL** port. • OFF is selected as the default setting. • When you select the NETWORK BRIDGE, check the item, TRANSMISSTION METHOD (📖*below*).
		SERIAL SETTINGS Select the serial communication condition for the **CONTROL** port. **BAUD RATE** 4800bps ⇔ 9600bps ⇔ 19200bps ⇔ 38400bps **PARITY** NONE ⇔ ODD ⇔ EVEN • The BAUD RATE is fixed to 19200bps and PARITY is fixed NONE when the COMMUNICATION TYPE is set to OFF (📖*above*).
		TRANSMISSION METHOD Select the transmission method for communication by the NETWORK BRIDGE from the **CONTROL** port. HALF-DUPLEX ⇔ FULL-DUPLEX HALF-DUPLEX: This method lets the projector make two way communication, but only one direction, either transmitting or receiving data, is allowed at a time. FULL-DUPLEX: This method lets the projector make two way communication, transmitting and receiving data at the same time. • HALF-DUPLEX is selected as the default setting. • If you select HALF-DUPLEX, check the setting of the item RESPONSE LIMIT TIME (📖*62*).

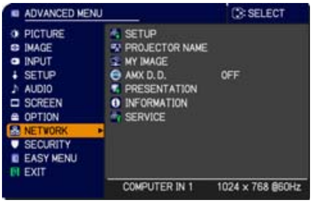
(continued on next page)

Item	Description	
SERVICE (continued)	**COMMUNICATION (continued)**	**RESPONSE LIMIT TIME** Select the time period to wait for receiving response data from other device communicating by the NETWORK BRIDGE and the HALF-DUPLEX through the **CONTROL** port. OFF ⇔ 1s ⇔ 2s ⇔ 3s OFF: Select this mode if it is not required to check the responses from the device that the projector sends data to. In this mode, the projector can send out data from the computer continuously. 1s /2s /3s: Select the time period to keep the projector waiting for response from the device that the projector sends data to. While waiting the response, the projector does not send out any data from the **CONTROL** port. • This menu is available only when the NETWORK BRIDGE is selected for the COMMUNICATION TYPE and the HALF-DUPLEX is selected for the TRANSMISSION METHOD (📖***61***). • OFF is selected as the default setting. **STACK** Selecting this item displays the STACK menu. For more information about this menu, check our web site. (📖**User's Manual (concise)**)

(continued on next page)

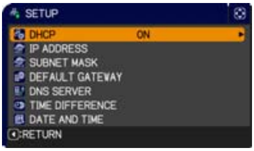
Item	Description
SERVICE (continued)	**INFORMATION** Selecting this item displays a dialog titled “INPUT_INFORMATION”. It shows the information about the current input.  INPUT_INFORMATION COMPUTER IN 1 1024 x 768 @60Hz FRAME LOCK  INPUT_INFORMATION S-VIDEO PAL AUTO  INPUT_INFORMATION COMPUTER IN 1 1080i @ 60Hz • The “FRAME LOCK” message on the dialog means the frame lock function is working. • The “SCART RGB” message means the **COMPONENT** ports is working as a SCART RGB input port. Please refer to the COMPONENT item in INPUT menu (📖*39*). • This item can't be selected for no signal and sync out. • When the MY TEXT DISPLAY is set to ON, the MY TEXT is displayed together with the input information in the INPUT_INFORMATION box (📖*76*).
	FACTORY RESET Selecting OK using the ► button performs this function. By this function, all the items in all of menus will collectively return to the initial setting. Note that the items LAMP TIME, FILTER TIME, LANGUAGE, FILTER MESSAGE, NETWORK and SECURITY settings are not reset. CANCEL ⇨ OK

NETWORK menu


ADVANCED MENU
SELECT
PICTURE
IMAGE
INPUT
SETUP
AUDIO
SCREEN
OPTION
NETWORK
SECURITY
EASY MENU
EXIT
SETUP
PROJECTOR NAME
MY IMAGE
AMX D.D.
OFF
PRESENTATION
INFORMATION
SERVICE
COMPUTER IN 1
1024 x 768 @60Hz

Remember that incorrect network settings on this projector may cause trouble on the network. Be sure to consult with your network administrator before connecting to an existing access point on your network. Select "NETWORK" from the main menu to access the following functions.
Select an item using the ▲/▼ cursor buttons on the projector or remote control, and press the ► cursor button on the projector or remote control, or **ENTER** button on the remote control to execute the item. Then perform it according to the following table.
See the **User's Manual - Network Guide** for details of NETWORK operation.

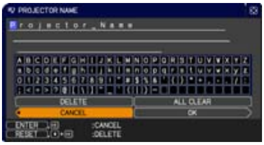
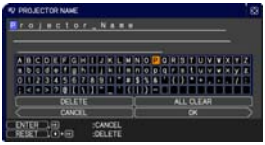
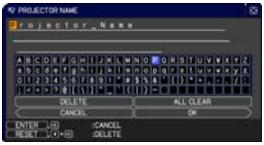
NOTE • If you are not utilizing SNTP (📖**Date/Time Settings** in the **User's Manual - Network Guide)**, then you must set the DATE AND TIME during the initial installation.
• The network communication control is disabled while the projector is in standby mode if the STANDBY MODE item of SETUP menu is set to SAVING. Please connect the network communication to the projector after setting the STANDBY MODE to NORMAL (📖*45*).

Item	Description	
SETUP	Selecting this item displays the SETUP Menu for the network. Use the ▲/▼ buttons to select an item, and the ► or **ENTER** button on the remote control to perform the item.  SETUP DHCP ON IP ADDRESS SUBNET MASK DEFAULT GATEWAY DNS SERVER TIME DIFFERENCE DATE AND TIME RETURN	
	DHCP (Dynamic Host Configuration Protocol)	Use the ▲/▼ buttons to turn DHCP on/off. ON ⇔ OFF Select OFF when the network does not have DHCP enabled. • When the "DHCP" setting changes to "ON", it takes a little time to obtain IP address from DHCP server. • Auto IP function will be assigned an IP address if the projector could not obtain an IP address from server even if DHCP is "ON".

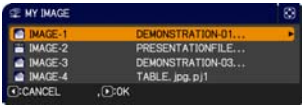
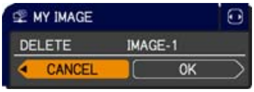
(continued on next page)

Item	Description	
SETUP (continued)	**IP ADDRESS**	Use the ▲/▼/◄/► buttons to enter the IP ADDRESS. This function can only be used when DHCP is set to OFF. • The IP ADDRESS is the number that identifies this projector on the network. You cannot have two devices with the same IP ADDRESS on the same network. • The IP ADDRESS “0.0.0.0” is prohibited.
	SUBNET MASK	Use the ▲/▼/◄/► buttons to enter the same SUBNET MASK used by your computer. This function can only be used when DHCP is set to OFF. • The SUBNET MASK “0.0.0.0” is prohibited.
	DEFAULT GATEWAY	Use the ▲/▼/◄/► buttons to enter the DEFAULT GATEWAY (a node on a computer network that serves as an access point to another network) address. This function can only be used when DHCP is set to OFF.
	DNS SERVER	Use the ▲/▼/◄/► buttons to input the DNS server address. The DNS server is a system to control domain names and IP addresses on the Network.
	TIME DIFFERENCE	Use the ▲/▼ buttons to enter the TIME DIFFERENCE. Set the same TIME DIFFERENCE as the one set on your computer. If unsure, consult your IT manager. Use the ► button to return to the menu after setting the TIME DIFFERENCE.
	DATE AND TIME	Use the ▲/▼/◄/► buttons to enter the Year (last two digits), Month, Date, Hour and Minute. • The projector will override this setting and retrieve DATE AND TIME information from the Time server when SNTP is enabled. **(📖 Date/Time Settings** in the **User’s Manual - Network Guide)**

(continued on next page)

Item	Description
PROJECTOR NAME	(1) Use the ▲/▼ buttons on the NETWORK menu to select the PROJECTOR NAME and press the ► button. The PROJECTOR NAME dialog will be displayed.  PROJECTOR NAME Projector_Name DELETE ALL CLEAR CANCEL OK ENTER :CANCEL RESET :DELETE (2) The current PROJECTOR NAME will be displayed on the first 3 lines. Particular projector name is pre-assigned by default. Use the ▲/▼/◄/► buttons and the **ENTER** or **INPUT** button to select and enter characters. To erase 1 character at one time, press the **RESET** button or press the ◄ and **INPUT** button at the same time. Also if you move the cursor to DELETE or ALL CLEAR on screen and push the **ENTER** or **INPUT** button, 1 character or all characters will be erased.The PROJECTOR NAME can be input up to 64 characters. (3) To change an already inserted character, press the ▲/▼ button to move the cursor to one of the first 3 lines, and use the ◄/► buttons to move the cursor on the character to be changed. After pressing the **ENTER** or **INPUT** button, the character is selected. Then, follow the same procedure as described at the item (2) above.  PROJECTOR NAME Projector_Name DELETE ALL CLEAR CANCEL OK ENTER :CANCEL RESET :DELETE  PROJECTOR NAME Projector_Name DELETE ALL CLEAR CANCEL OK ENTER :CANCEL RESET :DELETE (4) To finish entering text, move the cursor to the OK on screen and press the ►, **ENTER** or **INPUT** button. To revert to the previous PROJECTOR NAME without saving changes, move the cursor to the CANCEL on screen and press the ◄, **ENTER** or **INPUT** button.

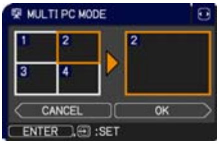
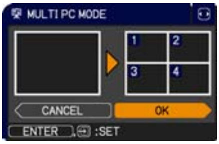
(continued on next page)

Item	Description
MY IMAGE	Selecting this item displays the MY IMAGE menu. To store images in the projector, the application software **PJImg/Projector Image Tool** that can be downloaded from our website is required.  MY IMAGE IMAGE-1 DEMONSTRATION-01... IMAGE-2 PRESENTATIONFILE... IMAGE-3 DEMONSTRATION-03... IMAGE-4 TABLE. jpg. pj1 :CANCEL :OK Use the ▲/▼ buttons to select an item which is a still image by the MY IMAGE **(📖 My Image Function** in the **User's manual - Network Guide)** and the ► or **ENTER** button to display the image. • The item without image stored cannot be selected. • The image names are each displayed in 16 characters or less. **To switch the image displayed** Use the ▲/▼ buttons. **To return to the menu** Press the ◄ button on the remote control. **To erase the image displayed and its source file in the projector.** (1) Press the **RESET** button on the remote control while displaying an image to display the MY IMAGE DELETE menu.  MY IMAGE DELETE IMAGE-1 CANCEL OK (2) Press the ► button to perform to erase. To stop erasing, press the ◄ button.
AMX D.D. (AMX Device Discovery)	Use the ▲/▼ buttons to turn the AMX Device Discovery on/off. ON ⇔ OFF When ON is selected, the projector can be detected by controllers of AMX connected to the same network. For the details of AMX Device Discovery, visit the AMX web site. URL: http://www.amx.com/ (as of Aug. 2010)

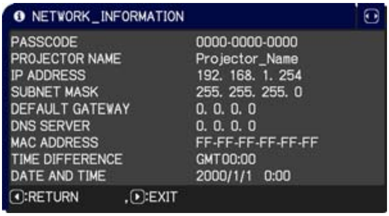
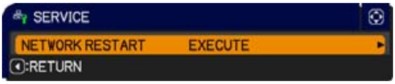
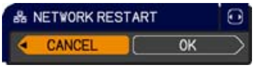
(continued on next page)

Item	Description	
PRESENTATION	Selecting this item displays the PRESENTATION menu. Use ▲/▼ buttons to select one of the following items, then press ► or **ENTER** button to use the function.	
	QUIT PRESENTER MODE	If you set a computer to the Presenter mode while its image is projected, the projector is occupied by the computer and access from any other computer is blocked. Use this function to quit the Presenter mode and allow other computers to access the projector. Select this item to display a dialog. Press ► button to choose OK in the dialog. The Presenter mode is cancelled and a message is displayed indicating the result. • To make Presenter mode setting, use "LiveViewer". For details, see the section **Presenter mode** in the **User's Manual – Network Guide**.
	MULTI PC MODE	If you set one or more computers to the Multi PC mode on "LiveViewer" and send their images to the projector, you can select the display mode on the projector from two options below. - Single PC mode: displays the image of the selected computer on full screen. - Multi PC mode: displays the images sent from up to four computers on screen that is divided into quarter sections. Select this item to display a dialog. Use the dialog to change the display mode as explained below.

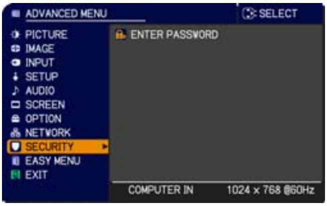
(continued on next page)

Item	Description	
PRESENTATION (continued)	**MULTI PC MODE (continued)**	• To change from Multi PC mode to Single PC mode, select one of computers in the dialog using the ▲/▼/◄/► buttons and press the **ENTER** or **INPUT** button. Press the ► button to choose OK, and then press **ENTER** or **INPUT** again. The image for the selected computer is displayed on full screen. • To change from Single PC mode to Multi PC mode, press ► button to choose OK in the dialog and press the **ENTER** or **INPUT** button. The display mode is changed.  MULTI PC MODE 1 2 3 4 2 CANCEL OK ENTER :SET • For details on how to switch the display mode to Multi PC mode on your computer, see the section **Switching the display mode** in the **User's Manual – Network Guide**. • The Presenter mode setting of the selected computer becomes valid when the display mode is changed to Single PC mode. Also, the Presenter mode setting becomes invalid when the display mode is changed to Multi PC mode, regardless the setting on the computers.  MULTI PC MODE 1 2 3 4 CANCEL OK ENTER :SET For details, see the section **Presenter mode** in the **User's Manual – Network Guide**.
	DISPLAY USER NAME	Selecting this item displays the user name. This function helps you identify from which computer the current image is sent. • You can set user names for each computer on “LiveViwer”. For details, see the section **Display User Name** in the **User's Manual – Network Guide**.

(continued on next page)

Item	Description
INFORMATION	Selecting this item displays the NETWORK_INFORMATION dialog for confirming the network settings.  PASSCODE 0000-0000-0000 PROJECTOR NAME Projector_Name IP ADDRESS 192. 168. 1. 254 SUBNET MASK 255. 255. 255. 0 DEFAULT GATEWAY 0. 0. 0. 0 DNS SERVER 0. 0. 0. 0 MAC ADDRESS FF-FF-FF-FF-FF-FF TIME DIFFERENCE GMT00:00 DATE AND TIME 2000/1/1 0:00 • For the details of PASSCODE, see the section **Selecting the network connection method** in the **User's manual – Network Guide.** • Only the first 16 characters of the projector name are displayed. • When the voltage level of the battery for the built in clock decreases, the set time may become incorrect even though accurate date and time are input. Replace the battery suitably (📖*93*). • IP ADDRESS, SUBNET MASK and DEFAULT GATEWAY indicate "0.0.0.0" when DHCP is ON and the projector has not gotten address from DHCP server.
SERVICE	Executing this item restarts and initializes the network functions. Choose the RESTART EXECUTE using the button ►.  Then use the button ► to execute.  Network will be once cut off when choose restart. If DHCP is selected on, IP address may be changed. After selecting RESTART EXECUTE, NETWORK menu may not be controlled approx. 30 seconds.

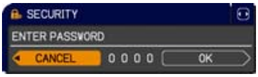
SECURITY menu


ADVANCED MENU
SELECT
PICTURE
IMAGE
INPUT
SETUP
AUDIO
SCREEN
OPTION
NETWORK
SECURITY
EASY MENU
EXIT
ENTER PASSWORD
COMPUTER IN
1024 x 768 @60Hz

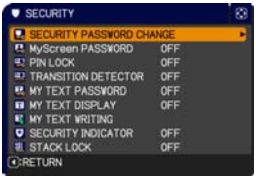
This projector is equipped with security functions.
From the SECURITY menu, items shown in the table below can be performed.
To use SECURITY menu: User registration is required before using the security functions.

Enter the SECURITY menu

1. Use the ▲/▼ buttons on the SECURITY menu to select ENTER PASSWORD and press the ► button. The ENTER PASSWORD box will be displayed.


SECURITY
ENTER PASSWORD
CANCEL
0 0 0 0
OK

2. Use the ▲/▼/◄/► buttons to enter the registered password. The factory default password is as follows.
   CP-X4021N, CP-X5021N: 1700
   CP-WX4021N: 0100

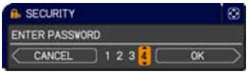

SECURITY
SECURITY PASSWORD CHANGE
MyScreen PASSWORD OFF
PIN LOCK OFF
TRANSITION DETECTOR OFF
MY TEXT PASSWORD OFF
MY TEXT DISPLAY OFF
MY TEXT WRITING
SECURITY INDICATOR OFF
STACK LOCK OFF
RETURN

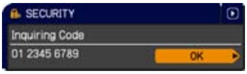
This password can be changed (📖*below*). Move the cursor to the right side of the ENTER PASSWORD box and press the ► button to display the SECURITY menu.

- It is strongly recommended the factory default password to be changed as soon as possible.
- If an incorrect password is input, the ENTER PASSWORD box will be displayed again. If incorrect password is input 3 times, the projector will turn off. Afterwards the projector will turn off every time an incorrect password is input.

3. Items shown in the table below can be performed.

If you have forgotten your password

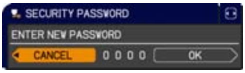
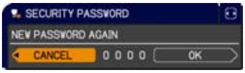
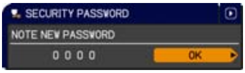

SECURITY
ENTER PASSWORD
CANCEL
1 2 3 4
OK


SECURITY
Inquiring Code
01 2345 6789
OK

(1) While the ENTER PASSWORD box is displayed, press and hold the **RESET** button on the remote control for about 3 seconds or press and hold the **INPUT** button for 3 seconds while pressing the ► button on the projector.

(2) The 10 digit Inquiring Code will be displayed. Contact your dealer with the 10 digit Inquiring Code. Your password will be sent after your user registration information is confirmed.

- If there is no key input for about 55 seconds while the Inquiring Code is displayed, the menu will close. If necessary, repeat the process from (1).

Item	Description
SECURITY PASSWORD CHANGE	 (1) Use the ▲/▼ buttons on the SECURITY menu to select SECURITY PASSWORD CHANGE and press the ► button to display the ENTER NEW PASSWORD box. (2) Use the ▲/▼/◄/► buttons to enter the new password.  (3) Move the cursor to the right side of the ENTER NEW PASSWORD box and press the ► button to display the NEW PASSWORD AGAIN box, enter the same password again.  (4) Move the cursor to the right side of the NEW PASSWORD AGAIN box and press the ► button and the NOTE NEW PASSWORD box will be displayed for about 30 seconds, please make note of the password during this time. Pressing the **ENTER** button on the remote control or ► button on the projector will close the NOTE NEW PASSWORD box. • Please do not forget your password.

(continued on next page)

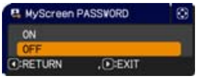
<table>
<tr><th>Item</th><th>Description</th></tr>
<tr><td>

MyScreen PASSWORD

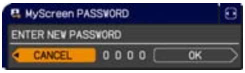
</td><td>

The MyScreen PASSWORD function can be used to prohibit access to the MyScreen function and prevent the currently registered MyScreen image from being overwritten.

1 Turning on the MyScreen PASSWORD

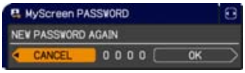

MyScreen PASSWORD
ON
OFF
:RETURN
:EXIT

1-1 Use the ▲/▼ buttons on the SECURITY menu to select MyScreen PASSWORD and press the ► button to display the MyScreen PASSWORD on/off menu.

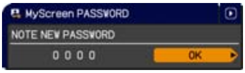

MyScreen PASSWORD
ENTER NEW PASSWORD
CANCEL
0 0 0 0
OK

ENTER NEW PASSWORD box (small)

1-2 Use the ▲/▼ buttons on the MyScreen PASSWORD on/off menu to select ON. The ENTER NEW PASSWORD box (small) will be displayed.


MyScreen PASSWORD
NEW PASSWORD AGAIN
CANCEL
0 0 0 0
OK

1-3 Use the ▲/▼/◄/► buttons to enter the password. Move the cursor to the right side of the ENTER NEW PASSWORD box (small) and press the ► button to display the NEW PASSWORD AGAIN box, enter the same PASSWORD again.


MyScreen PASSWORD
NOTE NEW PASSWORD
0 0 0 0
OK

1-4 Move the cursor to the right side of the NEW PASSWORD AGAIN box and press the ► button to display the NOTE NEW PASSWORD box for about 30 seconds, please make note of the password during this time.

Pressing the **ENTER** button on the remote control or ► button on the projector will return to MyScreen PASSWORD on/off menu.

When a password is set for MyScreen:

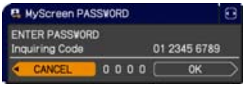
- The MyScreen registration function (and menu) will be unavailable.
- The MyScreen Lock menu will be unavailable.
- The START UP setting will be locked on MyScreen (and the menu will be unavailable).

Turning the MyScreen PASSWORD off will allow normal operation of these functions.

- Please do not forget your MyScreen PASSWORD.

2 Turning off the MyScreen PASSWORD

2-1 Follow the procedure in 1-1 to display the MyScreen PASSWORD on/off menu.


MyScreen PASSWORD
ENTER PASSWORD
Inquiring Code
01 2345 6789
CANCEL
0 0 0 0
OK

ENTER PASSWORD box (large)

2-2 Select OFF to display the ENTER PASSWORD box (large). Enter the registered password and the screen will return to the MyScreen PASSWORD on/off menu.

If an incorrect PASSWORD is input, the menu will close. If necessary, repeat the process from 2-1.

3 If you have forgotten your password

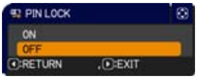
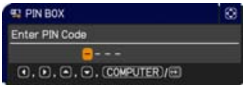
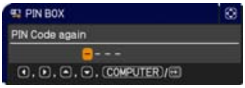
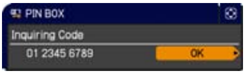
3-1 Follow the procedure in 1-1 to display the MyScreen PASSWORD on/off menu.

3-2 Select OFF to display the ENTER PASSWORD box (large). The 10 digit Inquiring Code will be displayed inside the box.

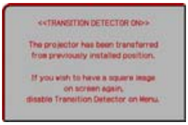
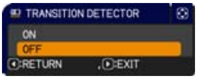
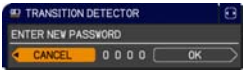
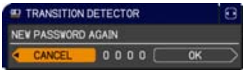
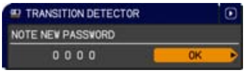
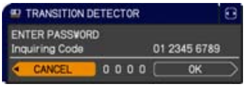
3-3 Contact your dealer with the 10 digit Inquiring Code. Your password will be sent after your user registration information is confirmed.

</td></tr>
</table>

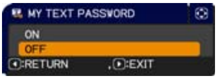
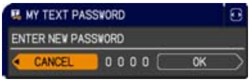
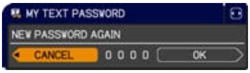
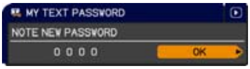
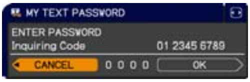
(continued on next page)

Item	Description
PIN LOCK	PIN LOCK is a function which prevents the projector from being used unless a registered Code is input. **1 Turning on the PIN LOCK**  1-1 Use the ▲/▼ buttons on the SECURITY menu to select PIN LOCK and press the ► button or the **ENTER** button to display the PIN LOCK on/off menu.  1-2 Use the ▲/▼ buttons on the PIN LOCK on/off menu to select ON and the Enter PIN Code box will be displayed. 1-3 Input a 4 part PIN code using the ▲/▼/◄/►, **COMPUTER** or **INPUT** button. The PIN Code again box will appear. Reenter the same PIN code. This will complete the PIN code registration.  • If there is no key input for about 55 seconds while the Enter PIN Code box or the PIN Code again box is displayed, the menu will close. If necessary, repeat the process from 1-1. Afterwards, anytime the projector is restarted after AC power is turned off the Enter PIN Code box will be displayed. Enter the registered PIN code. The projector can be used after entering the registered PIN code. If an incorrect PIN code is input, the Enter PIN code box will be displayed again. If an incorrect PIN code is input 3 times, the projector will turn off. Afterwards the projector will turn off every time an incorrect PIN code is input. The projector will also turn off if there is no key input for about 5 minutes while the Enter PIN code box is displayed. This function will activate only when the projector is started after AC power is turned off. • Please do not forget your PIN code. **2 Turning off the PIN LOCK** 2-1 Follow the procedure in 1-1 to display the PIN LOCK on/off menu. 2-2 Use the ▲/▼ buttons to select OFF and the Enter PIN Code box will be displayed. Enter the registered PIN code to turn the PIN LOCK function off. If an incorrect PIN Code is input 3 times, the menu will close. **3 If you have forgotten your PIN code** 3-1 While the Enter PIN code box is displayed, press and hold the **RESET** button for three seconds or press and hold the **INPUT** button for 3 seconds while pressing the ► button on the projector. The 10 digit Inquiring Code will be displayed.  • If there is no key input for about 5 minutes while the Inquiring Code is displayed, the projector will turn off. 3-2 Contact your dealer with the 10 digit Inquiring Code. Your PIN code will be sent after your user registration information is confirmed.

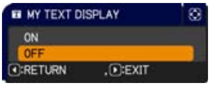
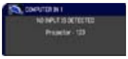
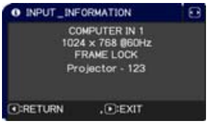
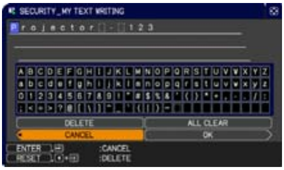
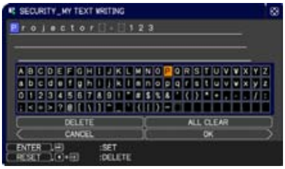
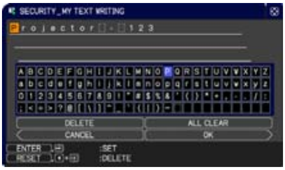
(continued on next page)

Item	Description
TRANSITION DETECTOR	If this function is set to ON when the vertical angle of the projector or MIRROR setting at which the projector is turned on is different than the previously recorded, the TRANSITION DETECTOR ON alarm will be displayed and the projector will not display the input signal.  <<TRANSITION DETECTOR ON>> The projector has been transferred from previously installed position. If you wish to have a square image on screen again, disable Transition Detector on Menu. • To display the signal again, set this function OFF. • After about 5 minutes of displaying the TRANSITION DETECTOR ON alarm, the lamp will turn off. • Keystone adjustment feature has been prohibited as long as the Transition Detector function is on. **1 Turning on the TRANSITION DETECTOR** 1-1 Use the ▲/▼ buttons on the SECURITY menu to select TRANSITION DETECTOR and press the ► or the **ENTER** button to display the TRANSITION DETECTOR on/off menu.  1-2 Use the ▲/▼ buttons on the TRANSITION DETECTOR on/off menu to select ON. Select ON and the current angle and MIRROR setting will be recorded. The ENTER NEW PASSWORD box (small) will be displayed.  TRANSITION DETECTOR ENTER NEW PASSWORD CANCEL 0 0 0 0 OK ENTER NEW PASSWORD box (small) 1-3 Use the ▲/▼/◄/► buttons to enter a password. Move the cursor to the right side of the ENTER NEW PASSWORD box (small) and press the ► button to display the NEW PASSWORD AGAIN box, enter the same password again.  TRANSITION DETECTOR NEW PASSWORD AGAIN CANCEL 0 0 0 0 OK 1-4 Move the cursor to the right side of the NEW PASSWORD AGAIN box and press the ► button to display the NOTE NEW PASSWORD box for about 30 seconds, please make note of the password during this time.  Pressing the **ENTER** button on the remote control or the ► button on the projector will return to the TRANSITION DETECTOR on/off menu. • Please do not forget your TRANSITION DETECTOR password. • This function will activate only when the projector is started after turning off the AC power. • This feature may not function properly if the projector is not in a stable position when ON is selected. **2 Turning off the TRANSITION DETECTOR** 2-1 Follow the procedure in 1-1 to display the TRANSITION DETECTOR on/off menu. 2-2 Select OFF to display the ENTER PASSWORD box (large). Enter the registered password and the screen will return to the TRANSITION DETECTOR on/off menu. If an incorrect password is input, the menu will close. If necessary, repeat the process from 2-1.  TRANSITION DETECTOR ENTER PASSWORD Inquiring Code 01 2345 6789 CANCEL 0 0 0 0 OK ENTER PASSWORD box (large) **3 If you have forgotten your password** 3-1 Follow the procedure in 1-1 to display the TRANSITION DETECTOR on/off menu. 3-2 Select OFF to display the ENTER PASSWORD box (large). The 10 digit Inquiring Code will be displayed inside the box. 3-3 Contact your dealer with the 10 digit Inquiring Code. Your password will be sent after your user registration information is confirmed.

(continued on next page)

Item	Description
MY TEXT PASSWORD	The MY TEXT PASSWORD function can prevent the MY TEXT from being overwritten. When the password is set for the MY TEXT; • The MY TEXT DISPLAY menu will be unavailable, which can prohibit changing the DISPLAY setting. • The MY TEXT WRITING menu will be unavailable, which can prevent the MY TEXT from being overwritten. **1 Turning on the MY TEXT PASSWORD** 1-1 Use the ▲/▼ buttons on the SECURITY menu to select the MY TEXT PASSWORD and press the ► button to display the MY TEXT PASSWORD on/off menu.  MY TEXT PASSWORD ON OFF ◄:RETURN ►:EXIT 1-2 Use the ▲/▼ buttons on the MY TEXT PASSWORD on/off menu to select ON. The ENTER NEW PASSWORD box (small) will be displayed.  MY TEXT PASSWORD ENTER NEW PASSWORD CANCEL 0 0 0 0 OK ENTER NEW PASSWORD box (small) 1-3 Use the ▲/▼/◄/► buttons to enter the password. Move the cursor to the right side of the ENTER NEW PASSWORD box (small) and press the ► button to display the NEW PASSWORD AGAIN box, and then enter the same password again. 1-4 Move the cursor to the right side of the NEW PASSWORD AGAIN box and press ► button to display the NOTE NEW PASSWORD box for about 30 seconds, then please make note of the password during this time.  MY TEXT PASSWORD NEW PASSWORD AGAIN CANCEL 0 0 0 0 OK  MY TEXT PASSWORD NOTE NEW PASSWORD 0 0 0 0 OK Pressing the **ENTER** button on the remote control or ► button on the projector will return to the MY TEXT PASSWORD on/off menu. **2 Turning off the MY TEXT PASSWORD** 2-1 Follow the procedure in 1-1 to display the MY TEXT PASSWORD on/off menu. 2-2 Select OFF to display the ENTER PASSWORD box (large). Enter the registered password and the screen will return to the MY TEXT PASSWORD on/off menu.  MY TEXT PASSWORD ENTER PASSWORD Inquiring Code 01 2345 6789 CANCEL 0 0 0 0 OK ENTER PASSWORD box (large) If an incorrect password is input, the menu will close. If necessary, repeat the process from 2-1 **3 If you have forgotten your password** 3-1 Follow the procedure in 1-1 to display the MY TEXT PASSWORD on/off menu. 3-2 Select OFF to display the ENTER PASSWORD box (large). The 10 digit inquiring code will be displayed inside the box. 3-3 Contact your dealer with the 10 digit inquiring code. Your password will be sent after your user registration information is confirmed.

(continued on next page)

Item	Description
MY TEXT DISPLAY	 MY TEXT DISPLAY ON OFF :RETURN :EXIT (1) Use the ▲/▼ buttons on the SECURITY menu to select the MY TEXT DISPLAY and press the ► or **ENTER** button to display the MY TEXT DISPLAY on/off menu. (2) Use the ▲/▼ buttons on the MY TEXT DISPLAY on/off menu to select on or off. ON ⇔ OFF  COMPUTER IN 1 NO INPUT IS DETECTED Projector - 123  INPUT_INFORMATION COMPUTER IN 1 1024 x 768 @60Hz FRAME LOCK Projector - 123 :RETURN :EXIT When it is set ON, the MY TEXT will be displayed on the START UP screen and the INPUT_INFORMATION when the INFORMATION on the SERVICE menu is chosen. • This function is available only when the MY TEXT PASSWORD function is set to the OFF.
MY TEXT WRITING	(1) Use the ▲/▼ buttons on the SECURITY menu to select the MY TEXT WRITING and press the ► button. The MY TEXT WRITING dialog will be displayed.  SECURITY_MY TEXT WRITING Projector - 123 DELETE ALL CLEAR CANCEL OK ENTER :CANCEL RESET :DELETE (2) The current MY TEXT will be displayed on the first 3 lines. If not yet written, the lines will be blank. Use the ▲/▼/◄/► buttons and the **ENTER** or **INPUT** button to select and enter characters. To erase 1 character at one time, press the **RESET** button or press the ◄ and **INPUT** button at the same time. Also if you move the cursor to DELETE or ALL CLEAR on screen and press the **ENTER** or **INPUT** button, 1 character or all characters will be erased. The MY TEXT can be input up to 24 characters on each line.  SECURITY_MY TEXT WRITING Projector - 123 DELETE ALL CLEAR CANCEL OK ENTER :SET RESET :DELETE (3) To change an already inserted character, press the ▲/▼ button to move the cursor to one of the first 3 lines, and use the ◄/► buttons to move the cursor on the character to be changed.  SECURITY_MY TEXT WRITING Projector - 123 DELETE ALL CLEAR CANCEL OK ENTER :SET RESET :DELETE After pressing the **ENTER** or **INPUT** button, the character is selected. Then, follow the same procedure as described at the item (2) above. (4) To finish entering text, move the cursor to the OK on screen and press the ►, **ENTER** or **INPUT** button. To revert to the previous MY TEXT without saving changes, move the cursor to the CANCEL on screen and press the ◄, **ENTER** or **INPUT** button. • The MY TEXT WRITING function is available only when the MY TEXT PASSWORD function is set to OFF.
SECURITY INDICATOR	Selecting this item displays the SECURITY INDICATOR dialog. Use the ▲/▼ buttons to select ON or OFF. ON ⇔ OFF When ON is selected while PIN LOCK or TRANSITION DETECTOR is ON, the **SECURITY** indicator blinks in the standby state (📖*73, 74*).
STACK LOCK	Selecting this item displays the STACK LOCK dialog. For more information about this menu, check our web site (📖***User's manual (concise)***).

Presentation tools

The projector has the following two convenient tools that enable on-screen presentations easily and quickly:

- PC-LESS Presentation (📖*below*)
- USB Display (📖*86*)

PC-LESS Presentation

The PC-LESS Presentation reads image data from storage media inserted into the **USB TYPE A** port and displays the image on the following modes.
The PC-LESS Presentation can be started by selecting the **USB TYPE A** port as the input source.
This feature allows you to make your presentations without using your computer.

- Thumbnail mode (📖*78*)
- Full Screen mode (📖*82*)
- Slideshow mode (📖*83*)

[Supported storage media]

- USB memory (USB memory type, USB hard disk and USB card reader type)

NOTE • USB readers (adapters) that have more than one USB slot may not work (if the adapter is acknowledged as multiple devices connected).
• USB hubs may not work.
• USB devices with security software may not work.
• Be careful when inserting or removing a USB device. (📖*12, 80*)

[Supported format]

- FAT12, FAT16 and FAT32

NOTE • NTFS is not supported.

[Supported file format]

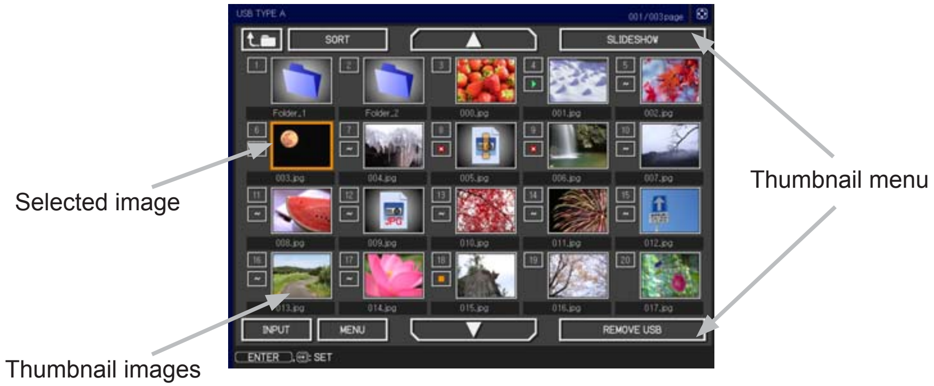
• JPEG (.jpeg, .jpg)	* Progressive is not supported.
• Bitmap (.bmp)	* 16bit mode and compressed bitmap is not supported.
• PNG (.png)	* Interlace PNG is not supported.
• GIF (.gif)	

NOTE • Files with a resolution larger than the following are not supported.
CP-X4021N, CP-X5021N: 1024X768
CP-WX4021N: 1280 x 800
(* Some computers may not support 1280 x 800.)
• Files with a resolution smaller than 36x36 are not supported.
• Files with a resolution smaller than 100x100 may not be displayed.
• Some supported files may not be displayed.
• Only a frame appears when the content of image data cannot be displayed in the Thumbnail mode.

PC-LESS Presentation (continued)

Thumbnail mode

The Thumbnail mode displays the images stored in a USB storage device on the Thumbnail screen. Maximum 20 images are displayed in a screen.
If you wish, you can jump into the Full Screen mode or Slideshow mode, after you select some images in the Thumbnail mode.
The Thumbnail mode will be started as the primary function of the PC-LESS Presentation after selecting the **USB TYPE A** port as the input source.


USB TYPE A
001/003page
SORT
SLIDESHOW
Folder_1
Folder_2
000.jpg
001.jpg
002.jpg
003.jpg
004.jpg
005.jpg
006.jpg
007.jpg
008.jpg
009.jpg
010.jpg
011.jpg
012.jpg
013.jpg
014.jpg
015.jpg
016.jpg
017.jpg
INPUT
MENU
REMOVE USB
ENTER : SET
Selected image
Thumbnail menu
Thumbnail images

PC-LESS Presentation (continued)

Operating by buttons or keys

You can control the images in the Thumbnail screen with the remote control or keypad or a web browser software. The following functions can be supported while the Thumbnail is displayed.

Button operation			**Functions**
The remote control	The keypad on the projector	Web Remote in web browser software.	
▲/▼/◀/▶	▲/▼/◀/▶	UP/DOWN/LEFT/RIGHT	Move cursor
PAGE UP **PAGE DOWN**	-	PAGE UP PAGE DOWN	Switches pages
ENTER	**INPUT**	**ENTER**	• Displays the selected image on the Full Screen mode when a cursor is on a thumbnail image. • Displays the SETUP menu (📖***next***) for the selected image when a cursor is on a thumbnail image number.

The SETUP menu for the selected image

Item		**Functions**
SETUP		Use the ◀/▶ cursor buttons to switch each setting or use the ▶ cursor button to execute the functions as follows.
	RETURN	Press the ▶ cursor button or **ENTER** to return to the Thumbnail screen.
	START	Switch to ON to set the selected image as the first image in the Slideshow. This setting information will be saved in the “playlist.txt” file (📖***85***).
	STOP	Switch to ON to set the selected image as the last image in the Slideshow. This setting information will be saved in the “playlist.txt” file (📖***85***).
	SKIP	Switch to ON to skip the selected image in the Slideshow. This setting information will be saved in the “playlist.txt” file (📖***85***).
	ROTATE	Press the ▶ cursor button or **ENTER** to rotate the selected image 90 degrees clockwise. This setting information will be saved in the “playlist.txt” file (📖***85***).

PC-LESS Presentation (continued)

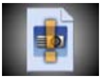
Operating by the menu on the Thumbnail screen

You can also control the images by using the menu on the Thumbnail screen.

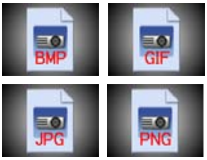
Item		Functions
📁		Moves to an upper folder.
SORT		Allows you to sort files and folders as following.
	RETURN	Press the ► cursor button or **ENTER** to return to the Thumbnail screen.
	NAME UP	Sorts in ascending order by file name.
	NAME DOWN	Sorts in descending order by file name.
	DATE UP	Sorts in ascending order by file date.
	DATE DOWN	Sorts in descending order.by file date.
◄/►		Go to previous / next page.
SLIDESHOW		Configures and starts the Slideshow (📖*83*).
	RETURN	Press the ► cursor button or **ENTER** to return to the Thumbnail screen.
	PLAY	Press the ► cursor button or **ENTER** to start the Slideshow.
	START	Sets the beginning number of the Slideshow.
	STOP	Sets the end number of the Slideshow.
	INTERVAL	Sets the interval time of the Slideshow.
	PLAY MODE	Selects the Slideshow mode.
INPUT		Switches the input port.
MENU		Displays the menu.
REMOVE USB		Be sure to use this function before removing USB storage device from the projector. After that, the projector will not recognize a USB storage device until you insert it again into the **USB TYPE A** input port.

PC-LESS Presentation (continued)

NOTE • These operations are not accessible while the projector OSD is displayed.
- The Thumbnail mode shows 20 pictures in 1 page as maximum.
- It is not possible to change the input port by using the **INPUT** button when the Thumbnail screen, Slideshow, or Full Screen is displayed.
- Some error icons will be displayed in the Thumbnail.



This file seems to be broken or not supported format.



A file that cannot be displayed on the thumbnail screen is indicated by a file format icon.

PC-LESS Presentation (continued)

Full Screen Mode

The Full Screen mode shows a full display image. To display in Full Screen mode, select an image in the Thumbnail screen. Then press the **ENTER** button on the remote control or the **INPUT** button on the keypad, or click **[ENTER]** on the Web Remote Control.

Full screen display

The following functions can be supported in the Full Screen mode.

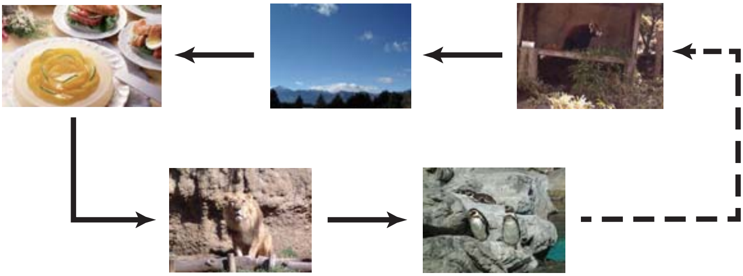
Button operation			**Functions**
The remote control	The keypad on the projector	Web Remote in web browser software.	
▼ ► or PAGE DOWN	▼ or ►	DOWN, RIGHT or PAGE DOWN	Shows the next picture.
▲ ◄ or PAGE UP	▲ or ◄	UP, LEFT or PAGE UP	Shows the previous picture.
ENTER	**INPUT**	**ENTER**	Displays Thumbnail.

NOTE • These operations are not accessible while the projector OSD is displayed.
• It is not possible to change the input port by using the **INPUT** button when the Thumbnail screen, Slideshow, or Full Screen is displayed.

PC-LESS Presentation (continued)

Slideshow mode

The Slideshow mode displays images in full screen and switches the images at intervals set in INTERVAL on the Thumbnail screen menu (📖*78*).



You can start this function from the Slideshow menu. To display the Slideshow menu, select the SLIDESHOW button in the Thumbnail mode and press the **ENTER** button on the remote control or **INPUT** button on the projector.

The following operations can be accessible while the Slideshow is displayed.

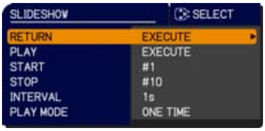
Button operation			**Functions**
The remote control	The keypad on the projector	Web Remote in web browser software.	
ENTER	**INPUT**	**ENTER**	Displays thumbnail

* These operations are not accessible while the projector OSD is displayed.

NOTE • It is not possible to change the input port by using the **INPUT** button when the Thumbnail screen, Slideshow, or Full Screen is displayed.
• When the Slideshow mode is set to ONE TIME, the last slide of the presentation will be held on screen till the **ENTER** button on the remote control or Web Remote Control, or **INPUT** button on the projector is pushed.

PC-LESS Presentation (continued)

You can play the Slideshow at your desired configuration.
Configure the Slideshow items in the Thumbnail.



SLIDESHOW
SELECT

RETURN	EXECUTE
PLAY	EXECUTE
START	#1
STOP	#10
INTERVAL	1s
PLAY MODE	ONE TIME

1) RETURN : Returns to the thumbnail mode.
2) PLAY : Play the Slideshow.
3) START : Set the beginning number of the Slideshow.
4) STOP : Set the end number of the Slideshow.
5) INTERVAL : Set the interval time of the Slideshow. It is not recommend to set the interval time very short something like several seconds, because it may take more than several seconds to read and display an image file if it is stored in very deep layer directory or if so many files are stored in the same directory.
6) PLAY MODE : Select the Slideshow mode.
ONE TIME : Play the Slideshow one time.
ENDLESS : Play the Slideshow endless.

NOTE • The settings of the Slideshow are saved to the **"playlist.txt"** file that is stored in the storage media. If the file is not existed, it is generated automatically.
• The settings for the START, STOP, INTERVAL, and PLAY MODE are saved to the Playlist.
• If the storage media is under the write protection or the **"playlist.txt"** is the read only type file, it is impossible to change the settings of the Slideshow.

PC-LESS Presentation (continued)

Playlist

The Playlist is a DOS format text file, which decides the order of displayed still image files in the Thumbnail or Slideshow.
The playlist file name is “playlist.txt” and it can be edited on a computer.
It is created in the folder that contains the selected image files when the PC-LESS Presentation is started or the Slideshow is configured.

[Example of “playlist.txt” files]

```
START setting : STOP setting : INTERVAL setting : PLAY MODE setting :
img001.jpg: : : :
img002.jpg:600: : :
img003.jpg:700:rot1: :
img004.jpg: : :SKIP:
img005.jpg:1000:rot2:SKIP:
```

The “playlist.txt” file contains the following information.
Each piece of information requires to be separated by “:”, and “:” at the end of each line.
1st line: START, STOP, INTERVAL and PLAY MODE settings (📖*84*).
2nd line and after: file name, interval time, rotation setting and skip setting.

interval time: It can be set from 0 to 999900 (ms) with an increment of 100 (ms).
rotation setting: “rot1” means a rotation at 90 degrees clockwise; “rot2” and “rot3” increase another 90 degrees in order.
skip setting: “SKIP” means that the image will not be displayed in the Slideshow.

NOTE • The maximum length in a line on the "playlist.txt" file is 255 characters including linefeed. If any line exceeds the limit, the "playlist.txt" file becomes invalid.
• Up to 999 files can be registered to the Playlist. However, if some folders exist in the same directory the limit number is decreased by the number of folders.
Any files over the limit will not be shown in the Slideshow.
• If the storage device is protected or does not have sufficient space, the “playlist.txt” file cannot be created.
• For the Slideshow settings, refer to the section **Slideshow mode** (📖*83*).

USB Display

The projector can display images transferred from a computer via an USB cable (📖*10*).

Hardware and software requirement for computer

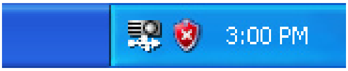
- **OS**: One of the following. (32 bit version only)
  Windows ® XP Home Edition /Professional Edition
  Windows Vista ® Home Basic /Home Premium /Business /Ultimate /Enterprise
  Windows ® 7 Starter /Home Basic /Home Premium /Professional / Ultimate /Enterprise
- **CPU**: Pentium 4 (2.8 GHz or higher)
- **Graphic card**: 16 bit, XGA or higher
- **Memory**: 512 MB or higher
- **Hard disk space**: 30 MB or higher
- **USB Port**
- **USB cable** : 1 piece

Select the USB DISPLAY for the USB TYPE B item in the OPTION menu. When you connect your computer to the **USB TYPE B** port on the projector using a USB cable, the projector will be recognized as a CD-ROM drive on your computer. Then, the software in the projector, “LiveViewerLiteUSB.exe”, will run automatically and the application, “LiveViewer Lite for USB”, will be ready on your computer for the USB Display. The application, “LiveViewer Lite for USB”, will be automatically closed when the USB cable is unplugged.

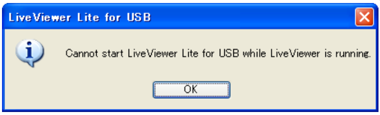
NOTE • If the software does not start automatically (this is typically because CD-ROM autorun is disabled on your OS), follow the instructions below.
(1) Click on the [Start] button on the toolbar and select the “Run”
(2) Enter F:\LiveViewerLiteUSB.exe and then press the [OK]
↑—— If your CD-ROM drive is not drive F on your computer, you will need to replace F with the correct drive letter assigned to your CD-ROM drive.

• CD-ROM autorun is disabled while the screen saver is running.
• The image transmission from the computer is suspended while the password-protected screen saver is running. To resume the transmission, exit the screen saver.
• Check our web site for the latest version of the software and its manual.
(📖**User's Manual (concise)**)
Follow the instructions that can be obtained at the site for updating.

This application will appear in the Windows notification area once it starts. You can quit the application from your computer by selecting “Quit” on the menu.



NOTE • The “LiveViewer” (refer to the **User's Manual - Network Guide**) and this application cannot be used at the same time. If you connect your computer to the projector by using a USB cable while the “LiveViewer” is running, the following message will be displayed.


LiveViewer Lite for USB

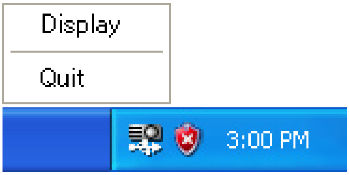
Cannot start LiveViewer Lite for USB while LiveViewer is running.

• If any application software having the firewall function is installed into your computer, make the firwall function invalid with following the user's manual.
• Some security software may block image transmission. Please change the security software setting to allow the use of "LiveViewer Lite for USB".

USB Display (continued)

Right-Click menu

The menu shown in the right will be displayed when you right-click the application icon in the Windows notification area.



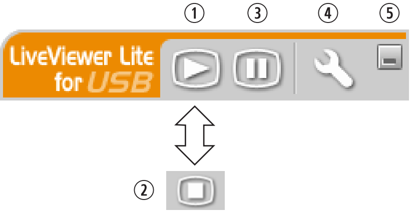
Display : The Floating menu is displayed, and the icon disappears from the Windows notification area.

Quit : The application is closed, and the icon disappears from the Windows notification area.

NOTE • If you wish to restart the application, you need to unplug the USB cable and plug it again.

Floating menu

If you select “Display” on the Right-Click menu, the Floating menu shown in the right will appear on your computer screen.



① Start capture button
The transmission to the projector is started and the images will be displayed.

② Stop button
The image transmission is stopped.

③ Hold button
The image on the projector’s screen is temporally frozen. The last image before the button is clicked is remained on the screen. You can revise the image data on your computer without showing it on the projector's screen.

④ Option button
The Options window is displayed.

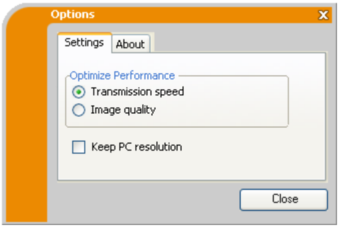
⑤ Minimize button
The Floating menu is closed, and the icon reappears in the Windows notification area.

NOTE • If you click the Start capture button and/or Stop button repeatedly, images may not be displayed on the screen.

USB Display (continued)

Options window

If you select the Option button on the Floating menu, the Options window is displayed.



Optimize Performance
- ● Transmission speed
- ○ Image quality

☐ Keep PC resolution

Optimize Performance

The “LiveViewer Lite for USB” captures screenshots in JPEG data and sends them to the projector. The “LiveViewer Lite for USB” has two options that have different compression rate of JPEG data.

Transmission speed

Speed takes priority over Image quality.
It makes JPEG compression rate higher.
The screen on the projector is rewritten quicker because the transferred data is smaller, but the image quality is worse.

Image quality

Image quality takes priority over Speed.
It makes JPEG compression rate lower.
The screen on the projector is rewritten slower because the transferred data is larger, but the image quality is better.

Keep PC resolution

If you remove the check mark from the **[Keep PC resolution]** box, the screen resolution of your computer will be switched as follows, and the display speed may be faster.
CP-X4021N, CP-X5021N: 1024X768 (XGA)
CP-WX4021N: 1280 x 800

If your computer does not support the display resolution specified above, a smaller resolution that is the largest among the resolutions that are supported by the computer will be selected.

NOTE • When the resolution is changed, the arrangement of icons on computer desktop screen may be changed.

About

The version information of the “LiveViewer Lite for USB”.

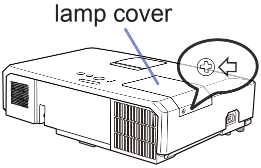
Maintenance

Replacing the lamp

A lamp has finite product life. Using the lamp for long periods of time could cause the pictures darker or the color tone poor. Note that each lamp has a different lifetime, and some may burst or burn out soon after you start using them. Preparation of a new lamp and early replacement are recommended. To prepare a new lamp, make contact with your dealer and tell the lamp type number.

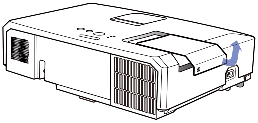
Type number : DT01171

Replacing the lamp

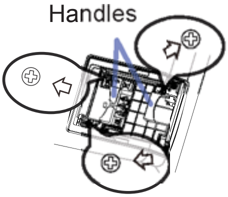


1. Turn the projector off, and unplug the power cord. Allow the projector to cool for at least 45 minutes.
2. Prepare a new lamp. If the projector is mounted on a ceiling, or if the lamp has broken, also ask the dealer to replace the lamp.

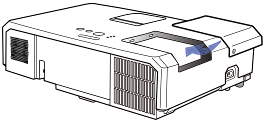
In case of replacement by yourself, follow the following procedure.



3. Loosen the screw (marked by arrow) of the lamp cover and then slide and lift the lamp cover to the side to remove it.
4. Loosen the 3 screws (marked by arrow) of the lamp, and slowly pick up the lamp by the handles. Never loosen any other screws.



5. Insert the new lamp, and retighten firmly the 3 screws of the lamp that are loosened in the previous process to lock it in place.
6. While putting the interlocking parts of the lamp cover and the projector together, slide the lamp cover back in place. Then firmly fasten the screw of the lamp cover.
7. Turn the projector on and reset the lamp time using the LAMP TIME item in the OPTION menu.
   (1) Press the **MENU** button to display a menu.
   (2) Point at the ADVANCED MENU in the menu using the ▼/▲ button, then press the ► button.
   (3) Point at the OPTION in the left column of the menu using the ▼/▲button, then press the ► button.
   (4) Point at the LAMP TIME using the ▼/▲ button, then press the ► button. A dialog will appear.
   (5) Press the ► button to select "OK" on the dialog. It performs resetting the lamp time.



⚠**CAUTION** ►Do not touch any inner space of the projector, while the lamp is taken out.

NOTE • Please reset the lamp time only when you have replaced the lamp, for a suitable indication about the lamp.

Replacing the lamp (continued)

Lamp warning

⚠ **HIGH VOLTAGE** ⚠ **HIGH TEMPERATURE** ⚠ **HIGH PRESSURE**

⚠**WARNING** ►The projector uses a high-pressure mercury glass lamp. The lamp can break with a loud bang, or burn out, if jolted or scratched, handled while hot, or worn over time. Note that each lamp has a different lifetime, and some may burst or burn out soon after you start using them. In addition, if the bulb bursts, it is possible for shards of glass to fly into the lamp housing, and for gas containing mercury and dust containing fine particles of glass to escape from the projector's vent holes.

►**About disposal of a lamp:** This product contains a mercury lamp; do not put it in a trash. Dispose of it in accordance with environmental laws.

- For lamp recycling, go to www.lamprecycle.org (in the US).
- For product disposal, consult your local government agency or www.eiae.org (in the US) or www.epsc.ca (in Canada).

For more information, call your dealer.

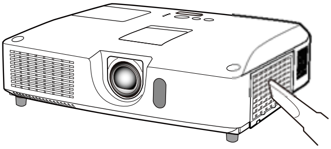
Disconnect the plug from the power outlet	• If the lamp should break (it will make a loud bang when it does), unplug the power cord from the outlet, and make sure to request a replacement lamp from your local dealer. Note that shards of glass could damage the projector's internals, or cause injury during handling, so please do not try to clean the projector or replace the lamp yourself. • If the lamp should break (it will make a loud bang when it does), ventilate the room well, and make sure not to inhale the gas or fine particles that come out from the projector's vent holes, and not to get them into your eyes or mouth. • Before replacing the lamp, turn the projector off and unplug the power cord, then wait at least 45 minutes for the lamp to cool sufficiently. Handling the lamp while hot can cause burns, as well as damaging the lamp.
🚫	• Never unscrew except the appointed (marked by an arrow) screws. • Do not open the lamp cover while the projector is suspended from a ceiling. This is dangerous, since if the lamp's bulb has broken, the shards will fall out when the cover is opened. In addition, working in high places is dangerous, so ask your local dealer to have the lamp replaced even if the bulb is not broken. • Do not use the projector with the lamp cover removed. At the lamp replacing, make sure that the screws are screwed in firmly. Loose screws could result in damage or injury.
!	• Use only the lamp of the specified type. Use of a lamp that does not meet the lamp specifications for this model could cause a fire, damage or shorten the life of this product. • If the lamp breaks soon after the first time it is used, it is possible that there are electrical problems elsewhere besides the lamp. If this happens, consult your local dealer or a service representative. • Handle with care: jolting or scratching could cause the lamp bulb to burst during use. • Using the lamp for long periods of time, could cause it dark, not to light up or to burst. When the pictures appear dark, or when the color tone is poor, please replace the lamp as soon as possible. Do not use old (used) lamps; this is a cause of breakage.

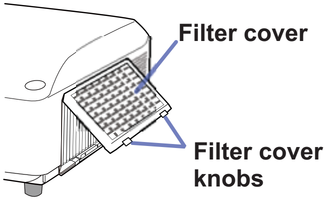
Cleaning and replacing the air filter

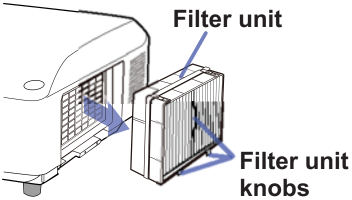
Please check and clean the air filter periodically. When the indicators or a message prompts you to clean the air filter, comply with it as soon as possible. The air filter of this projector consists of a filter cover and a filter unit with two types of filter. If one or both of the filters are damaged or heavily soiled, replace the filter unit with a new one.
Request for a filter unit with the following type number from your dealer when purchasing a new unit.

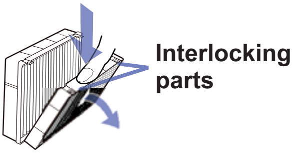
Type number : MU06641 (Filter unit)

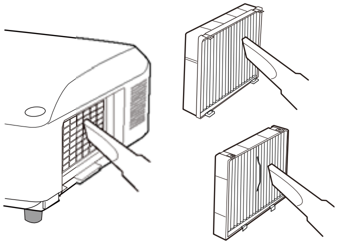
The specified filter unit also comes with a replacement lamp for this projector. Please replace the filter unit as well when you replace the lamp.











1. Turn the projector off, and unplug the power cord. Allow the projector to sufficiently cool down.
2. Use a vacuum cleaner on and around the filter cover.
3. Pick and pull up the filter cover knobs to take it off.
4. Press up slightly the bottom side knobs to unlock the bottom side of the filter unit. Pull the center knob to take the filter unit off.
5. Use a vacuum cleaner for the filter vent of the projector and the outer side of the filter unit.
6. The filter unit consists of two parts. Press down around the interlocking parts to unlock, then separate the two parts.
7. Use a vacuum cleaner for the inner side of each part of the filter unit to clean them up. If the filters are damaged or heavily soiled, replace them with the new ones.
8. Combine the two parts to reassemble the filter unit.
9. Put the filter unit back into the projector.

(continued on next page)

Cleaning and replacing the air filter (continued)

10. Put the filter cover back into the place.

11. Turn the projector on and reset the filter time using the FILTER TIME item in the EASY MENU.
    (1) Press the MENU button to display a menu.
    (2) Point at the FILTER TIME using the ▲/▼ cursor buttons, then press the ► cursor (or the **ENTER** / the **RESET**) button. A dialog will appear.
    (3) Press the ► cursor button to select the “OK” on the dialog. It performs resetting the filter time.

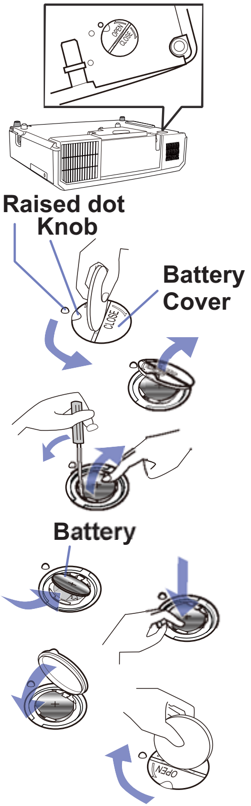
⚠**WARNING** ► Before taking care of the air filter, make sure the power cable is not plugged in, then allow the projector to cool sufficiently.
►Use only the air filter of the specified type. Do not use the projector without the air filter or the filter cover. It could result in a fire or malfunction to the projector.
►Clean the air filter periodically. If the air filter becomes clogged by dust or the like, internal temperatures rise and could cause a fire, a burn or malfunction to the projector.

NOTE • Please reset the filter time only when you have cleaned or replaced the air filter, for a suitable indication about the air filter.
• The projector may display the message such as the “CHECK THE AIR FLOW” or turn off the projector, to prevent the internal heat level rising.

Replacing the internal clock battery

This projector has internal clock that uses a battery. When the clock of the network function does not work correctly, please try solution by replacement of the battery: **HITACHI MAXELL**, part number **CR2032** or **CR2032H**.

1. Turn the projector off, and unplug the power cord. Allow the projector to cool sufficiently.
2. After making sure that the projector has cooled adequately, slowly turn over the projector, so that the bottom is facing.
3. There is a raised dot near the battery cover at the bottom of the projector. Turn the cover in the direction indicated **OPEN** to position one end of the slit on the cover with the dot, using a coin or the like. And then pick the cover up to remove it.
4. Pry up the battery using a flathead screwdriver or the like to take it out. While prying it up, put a finger lightly on the battery since it may pop out of the holder.
5. Replace with a new battery of the specified type. With the plus side facing up, slide the battery under the claw of the spring fitting. And press down on the battery until it snaps into place.
6. Replace the battery cover in place, then turn it in the direction indicated **CLOSE** to position the knob of the cover with the dot on the bottom case to fix the cover, using a coin or the like.



NOTE • The internal clock will be initialized by removing the battery. For setting the clock, see the **User's Manual - Network Guide**.

⚠**WARNING** ►Be careful of handling a battery, as a battery can cause explosion, cracking or leakage, which could result in a fire, an injury, and environment pollution.

- Use only the specified and perfect battery. Do not use a battery with damage, such as a scratch, a dent, rust or leakage.
- When replacing the battery, replace it with a new battery.
- When a battery leaked, wipe the leakage out well with a waste cloth. If the leakage adhered to your body, immediately rinse it well with water. When a battery leaked in the battery holder, replace the batteries after wiping the leakage out.
- Make sure the plus and minus terminals are correctly aligned when loading a battery.
- Do not work on a battery; for example recharging or soldering.
- Keep a battery in a dark, cool and dry place. Never expose a battery to a fire or water.
- Keep a battery away from children and pets. Be careful for them not to swallow a battery. If swallowed consult a physician immediately for emergency treatment.
- Obey the local laws on disposing a battery.

Other care

Inside of the projector

In order to ensure the safe use of your projector, please have it cleaned and inspected by your dealer about once every year.

Caring for the lens

If the lens is flawed, soiled or fogged, it could cause deterioration of display quality. Please take care of the lens, being cautious of handling.

1. Turn the projector off, and unplug the power cord. Allow the projector to cool sufficiently.
2. After making sure that the projector is cool adequately, lightly wipe the lens with a commercially available lens-cleaning wipe. Do not touch the lens directly with your hand.

Caring for the cabinet and remote control

Incorrect care could have adverse influence such as discoloration, peeling paint, etc.

1. Turn the projector off, and unplug the power cord. Allow the projector to cool sufficiently.
2. After making sure that the projector is cool adequately, lightly wipe with gauze or a soft cloth.
   If the projector is extremely dirty, dip soft cloth in water or a neutral cleaner diluted in water, and wipe lightly after wringing well. Then, wipe lightly with a soft, dry cloth.

⚠**WARNING** ►Before caring, make sure the power cord is not plugged in, and then allow the projector to cool sufficiently. The care in a high temperature state of the projector could cause a burn and/or malfunction to the projector.
►Never try to care for the inside of the projector personally. Doing is so dangerous.
►Avoid wetting the projector or inserting liquids in the projector. It could result in a fire, an electric shock, and/or malfunction to the projector.
• Do not put anything containing water, cleaners or chemicals near the projector.
• Do not use aerosols or sprays.

⚠**CAUTION** ►Please take right care of the projector according to the following. Incorrect care could cause not only an injury but adverse influence such as discoloration, peeling paint, etc.
►Do not use cleaners or chemicals other than those specified in this manual.
►Do not polish or wipe with hard objects.

NOTICE ►Do not directly touch the lens surface with hands.

Troubleshooting

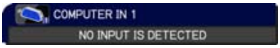
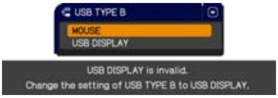
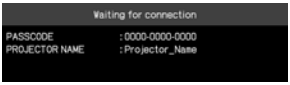
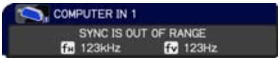
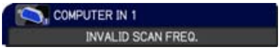
If an abnormal operation should occur, stop using the projector immediately.

⚠**WARNING** ►Never use the projector if abnormal operations such as smoke, strange odor, excessive sound, damaged casing or elements or cables, penetration of liquids or foreign matter, etc. should occur. In such cases, immediately disconnect the power plug from the power outlet. After making sure that the smoke or odor has stopped, contact to your dealer or service company.

Otherwise if a problem occurs with the projector, the following checks and measures are recommended before requesting repair.
If this does not resolve the problem, please contact your dealer or service company. They will tell you what warranty condition is applied.

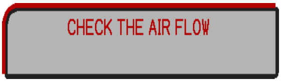
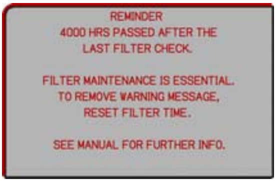
Related messages

When some message appears, check and cope with it according to the following table. Although these messages will be automatically disappeared around several minutes, it will be reappeared every time the power is turned on.

Message	Description
 COMPUTER IN 1 NO INPUT IS DETECTED	**There is no input signal.** Please confirm the signal input connection, and the status of the signal source.
 USB TYPE B MOUSE USB DISPLAY USB DISPLAY is invalid. Change the setting of USB TYPE B to USB DISPLAY.	**The USB TYPE B port is selected as the picture input source even if MOUSE is selected for USB TYPE B** (📖*55*). Select USB DISPLAY in the dialog to project the picture input to the USB TYPE B port. In this case, you cannot use the simple mouse and keyboard function. Otherwise select other port for picture input.
 Waiting for connection	**Projector is waiting for an image file.** Check the hardware connection, settings on the projector and network-related settings. The computer-Projector network connection might be disconnected. Please re-connect using “Connect button” of the “LiveViewer”. (📖**Using the “LiveViewer”** in the **User's Manual - Network Guide**)
 Waiting for connection PASSCODE :0000-0000-0000 PROJECTOR NAME :Projector_Name	
 COMPUTER IN 1 SYNC IS OUT OF RANGE fH 123kHz fV 123Hz	**The horizontal or vertical frequency of the input signal is not within the specified range.** Please confirm the specs for your projector or the signal source specs.
 COMPUTER IN 1 INVALID SCAN FREQ.	**An improper signal is input.** Please confirm the specs for your projector or the signal source specs.

(continued on next page)

Related messages (continued)

Message	Description
 CHECK THE AIR FLOW	**The internal temperature is rising.** Please turn the power off, and allow the projector to cool down at least 20 minutes. After having confirmed the following items, please turn the power ON again. • Is there blockage of the air passage aperture? • Is the air filter dirty? • Does the peripheral temperature exceed 35°C? If the same indication is displayed after the remedy, please set FAN SPEED of the SERVICE item in the OPTION menu to HIGH.
 REMINDER 4000 HRS PASSED AFTER THE LAST FILTER CHECK. FILTER MAINTENANCE IS ESSENTIAL. TO REMOVE WARNING MESSAGE, RESET FILTER TIME. SEE MANUAL FOR FURTHER INFO.	**A note of precaution when cleaning the air filter.** Please immediately turn the power off, and clean or change the air filter referring to the **Cleaning and replacing the air filter** section of this manual. After you have cleaned or changed the air filter, please be sure to reset the filter timer (📖***56,91***).
 NOT AVAILABLE	**The button operation is not available.**

Regarding the indicator lamps

When operation of the **LAMP**, **TEMP** and **POWER** indicators differs from usual, check and cope with it according to the following table.
For the **SECURITY** indicator, see SECURITY INDICATOR in the SECURITY menu.

POWER indicator	**LAMP indicator**	**TEMP indicator**	**Description**
Lighting In **Orange**	Turned **off**	Turned **off**	**The projector is in a standby state.** Please refer to the section "Power on/off".
Blinking In ***Green***	Turned **off**	Turned **off**	**The projector is warming up.** Please wait.
Lighting In **Green**	Turned **off**	Turned **off**	**The projector is in an on state.** Ordinary operations may be performed.
Blinking In ***Orange***	Turned **off**	Turned **off**	**The projector is cooling down.** Please wait.
Blinking In ***Red***	(discre-tionary)	(discre-tionary)	**The projector is cooling down. A certain error has been detected.** Please wait until **POWER** indicator finishes blinking, and then perform the proper measure using the item descriptions below.
Blinking In ***Red*** *or* Lighting In **Red**	Lighting In **Red**	Turned **off**	**The lamp does not light, and there is a possibility that interior portion has become heated.** Please turn the power off, and allow the projector to cool down at least 20 minutes. After the projector has sufficiently cooled down, please make confirmation of the following items, and then turn the power on again. • Is there blockage of the air passage aperture? • Is the air filter dirty? • Does the peripheral temperature exceed 35°C? If the same indication is displayed after the remedy, please change the lamp referring to the section **Replacing the lamp**.
Blinking In ***Red*** *or* Lighting In **Red**	*Blinking In* ***Red***	Turned **off**	**The lamp cover has not been properly fixed.** Please turn the power off, and allow the projector to cool down at least 45 minutes. After the projector has sufficiently cooled down, please make confirmation of the attachment state of the lamp cover. After performing any needed maintenance, turn the power on again. If the same indication is displayed after the remedy, please contact your dealer or service company.
Blinking In ***Red*** *or* Lighting In **Red**	Turned **off**	*Blinking In* ***Red***	**The cooling fan is not operating.** Please turn the power off, and allow the projector to cool down at least 20 minutes. After the projector has sufficiently cooled down, please make confirmation that no foreign matter has become caught in the fan, etc., and then turn the power on again. If the same indication is displayed after the remedy, please contact your dealer or service company.

(Continued on next page)

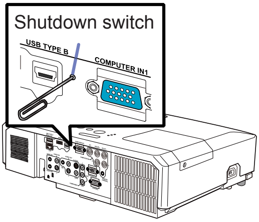
Regarding the indicator lamps (continued)

POWER indicator	LAMP indicator	TEMP indicator	Description
Blinking *In* ***Red*** *or* Lighting In **Red**	Turned **off**	Lighting In **Red**	**There is a possibility that the interior portion has become heated.** Please turn the power off, and allow the projector to cool down at least 20 minutes. After the projector has sufficiently cooled down, please make confirmation of the following items, and then turn the power on again. • Is there blockage of the air passage aperture? • Is the air filter dirty? • Does the peripheral temperature exceed 35°C? If the same indication is displayed after the remedy, please set FAN SPEED of SERVICE item in OPTION menu to HIGH (📖*59*).
Lighting In **Green**	Simultaneous *blinking in* ***Red***		**It is time to clean the air filter.** Please immediately turn the power off, and clean or change the air filter referring to the section **Cleaning and replacing the air filter**. After cleaning or changing the air filter, please be sure to reset the filter timer. After the remedy, reset the power to ON.
Lighting In **Green**	Alternative *blinking in* ***Red***		**There is a possibility that the interior portion has become overcooled.** Please use the unit within the usage temperature parameters (5°C to 35°C). After the treatment, reset the power to ON.
Blinking In **Green** for approx. 3 seconds.	Turned **off**	Turned **off**	**At least 1 Power ON schedule is saved to the projector.** Please refer to **Schedule Settings** section of **User's Manual - Network Guide.**

NOTE • When the interior portion has become overheated, for safety purposes, the projector is automatically shut down, and the indicator lamps may also be turned off. In such a case, disconnect the power cord, and wait at least 45 minutes. After the projector has sufficiently cooled down, please make confirmation of the attachment state of the lamp and lamp cover, and then turn the power on again.

Shutting the projector down

Only when the projector can not be turned off by usual procedure (📖*18*), please push the shutdown switch using a pin or similar, and disconnect the power plug from the power outlet. Before turning it on again, wait at least 10 minutes to make the projector cool down enough.



Resetting all settings

When it is hard to correct some wrong settings, the FACTORY RESET function of SERVICE item in OPTION menu (📖*63*) can reset all settings (except settings such as LANGUAGE, LAMP TIME, FILTER TIME, FILTER MESSAGE, SECURITY and NETWORK) to the factory default.

Phenomena that may be easy to be mistaken for machine defects

About the phenomenon confused with a machine defect, check and cope with it according to the following table.

Phenomenon	Cases not involving a machine defect	Reference page
Power does not come on.	**The electrical power cord is not plugged in.** Correctly connect the power cord.	15
	The main power source has been interrupted during operation such as by a power outage (blackout), etc. Please disconnect the power plug from the power outlet, and allow the projector to cool down at least 10 minutes, then turn the power on again.	15
	Either there is no lamp and/or lamp cover, or either of these has not been properly fixed. Please turn the power off and disconnect the power plug from the power outlet, and allow the projector to cool down at least 45 minutes. After the projector has sufficiently cooled down, please make confirmation of the attachment state of the lamp and lamp cover, and then turn the power on again.	89
Neither sounds nor pictures are outputted.	**The signal cables are not correctly connected.** Correctly connect the connection cables.	10 ~ 14
	Signal source does not correctly work. Correctly set up the signal source device by referring to the manual of the source device.	–
	The input changeover settings are mismatched. Select the input signal, and correct the settings.	19 ~ 21
	The BLANK function for pictures and the MUTE function for sounds are working. AV MUTE may be active. Refer to the item “Sound does not come out” and “No pictures are displayed” on the next page to turn off the MUTE and BLANK functions.	19, 28, 100

(Continued on next page)

Phenomena that may be easy to be mistaken for machine defects (continued)

Phenomenon	Cases not involving a machine defect	Reference page
Sound does not come out.	**The signal cables are not correctly connected.** Correctly connect the audio cables.	10 ~ 14
	The MUTE function is working. Restore the sound pressing **MUTE** or **VOLUME +/-** button on the remote control.	19
	The volume is adjusted to an extremely low level. Adjust the volume to a higher level using the menu function or the remote control.	19, 46, 47
	The AUDIO SOURCE/SPEAKER setting is not correct. Correctly set the AUDIO SOURCE/SPEAKER in AUDIO menu.	46
	The mode selected for HDMI AUDIO is not suitable. Check each of the two modes provided and select the suitable one for your HDMI audio device.	47
No pictures are displayed.	**The lens cover is attached.** Remove the lens cover.	4, 18
	The signal cables are not correctly connected. Correctly connect the connection cables.	10 ~ 14
	The brightness is adjusted to an extremely low level. Adjust BRIGHTNESS to a higher level using the menu function.	33
	The computer cannot detect the projector as a plug and play monitor. Make sure that the computer can detect a plug and play monitor using another plug and play monitor.	10
	The BLANK screen is displayed. Press **BLANK** button on the remote control.	28
	The USB TYPE B port is selected as the picture input source even if MOUSE is selected for USB TYPE B. Select USB DISPLAY for USB TYPE B in OPTION menu to project the picture input to the port. Otherwise select other port for picture input.	55
	The projector does not recognize the USB storage device inserted into USB TYPE A port. Use the REMOVE USB function first, remove the USB storage device, and then insert it into the port again. Before removing the USB storage device, be sure to use the REMOVE USB function on the thumbnail screen, which appears when the **USB TYPE A** port is selected as the input source.	12, 80

(continued on next page)

Phenomena that may be easy to be mistaken for machine defects (continued)

Phenomenon	Cases not involving a machine defect	Reference page
Video screen display freezes.	**The FREEZE function is working.** Press **FREEZE** button to restore the screen to normal.	28
Colors have a faded- out appearance, or Color tone is poor.	**Color settings are not correctly adjusted.** Perform picture adjustments by changing the COLOR TEMP, COLOR, TINT and/or COLOR SPACE settings, using the menu functions.	34, 39
	COLOR SPACE setting is not suitable. Change the COLOR SPACE setting to AUTO, RGB, SMPTE240, REC709 or REC601.	39
Pictures appear dark.	**The brightness and/or contrast are adjusted to an extremely low level.** Adjust BRIGHTNESS and/or CONTRAST settings to a higher level using the menu function.	33
	The projector is operating in Eco mode. Set ECO MODE to NORMAL, and set AUTO ECO MODE to OFF, in the SETUP menu.	44
	The lamp is approaching the end of its product lifetime. Replace the lamp.	89 ~ 90
Pictures appear blurry.	**Either the focus and/or horizontal phase settings are not properly adjusted.** Adjust the focus using the focus ring, and/or H PHASE using the menu function.	23, 38
	The lens is dirty or misty. Clean the lens referring to the section **Caring for the lens**.	94
Some kind of image degradation such as flickering or stripes appear on screen.	**When the projector is operating in Eco mode, flickering may appear on screen.** Set ECO MODE to NORMAL, and set AUTO ECO MODE to OFF, in the SETUP menu.	44
	The OVER SCAN ratio is too big. Adjust OVER SCAN in the IMAGE menu smaller.	36
	Excessive VIDEO NR. Change the setting of VIDEO NR in the INPUT menu.	39
	The FRAME LOCK function cannot work on the current input signal. Set FRAME LOCK in the INPUT menu to OFF.	41

(continued on next page)

Phenomena that may be easy to be mistaken for machine defects (continued)

Phenomenon	Cases not involving a machine defect	Reference page
The computer connected to the **USB TYPE B** port of the projector does not start up.	**The computer cannot start up in the current hardware configuration.** Disconnect the USB cable from the computer, then reconnect it after starting up the computer.	12
RS-232C does not work.	**The SAVING function is working.** Select NORMAL for STANDBY MODE item in the SETUP menu.	45
	The COMMUNICATION TYPE for the CONTROL port is set to NETWORK BRIDGE. Select OFF for COMMUNICATION TYPE item in the OPTION - SERVICE - COMMUNICATION menu.	61
Network does not work	**The SAVING function is working.** Select NORMAL for STANDBY MODE item in the SETUP menu.	45
NETWORK BRIDGE function does not work	**The NETWORK BRIDGE function is turned off.** Select NETWORK BRIDGE for COMMUNICATION TYPE item in the OPTION - SERVICE - COMMUNICATION menu.	61
Schedule function does not work	**The SAVING function is working.** Select NORMAL for STANDBY MODE item in the SETUP menu.	45
When the projector is connected to the network, it powers off and on as described below. Powers off ← ↓ **POWER** indicator blinks in orange a few times ↓ Goes into standby mode	**Disconnect the LAN cable and check that the projector is working properly.** If this phenomenon occurs after connecting to the network, there may be a loop between two Ethernet switching hubs within the network, as explained below. - There are two or more Ethernet switching hubs in a network. - Two of the hubs are doubly connected by LAN cables. - This double connection forms a loop between the two hubs. Such a loop may have an adverse effect on the projector as well as the other network devices. Check the network connection and remove the loop by disconnecting the LAN cables such that there is only one connecting cable between two hubs.	–
Video files cannot be played properly on a computer on which the "LiveViewer" was run.	**The "LiveViewer" has been intentionally or accidentally forced to shut down.** DirectDraw® or Direct3D® has been disabled on your Windows®. Please refer to the Microsoft® Help and Support home page on how to enable DirectDraw® or Direct3D®.	–

NOTE • Although bright spots or dark spots may appear on the screen, this is a unique characteristic of liquid crystal displays, and it does not constitute or imply a machine defect.

Specifications

Please see the **Specifications** in the **User's Manual (concise)** which is a book.

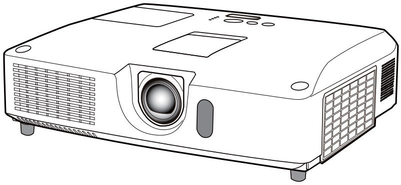
End User License Agreement for the Projector Software

- Software in the projector consists of the plural number of independent software modules and there exist our copyright or/and third party copyrights for each of such software modules.
- Be sure to read "End User License Agreement for the Projector Software" which is a separate document.

Projector

CP-X4021N/CP-X5021N/ CP-WX4021N

User's Manual (detailed) Network Guide



Thank you for purchasing this product.
This manual is intended to explain only the network function. For proper use of this product, please refer to this manual and the other manuals for this product.

⚠**WARNING** ►Before using this product, be sure to read all manuals for this product. After reading them, store them in a safe place for future reference.

Features

This projector has the network function that brings you the following main features.

✓ **Network Presentation** : allows the projector to project computer images transmitted through a network. (📖*37*)
✓ **Web Control** : allows you to monitor and control the projector through a network from a computer. (📖*45*)
✓ **My Image** : allows the projector to store up to four still images and project them. (📖*70*)
✓ **Messenger** : allows the projector to display text sent from a computer through a network. (📖*72*)
✓ **Network Bridge** : allows you to control an external device through the projector from a computer. (📖*74*)

NOTE • The information in this manual is subject to change without notice.
• The manufacturer assumes no responsibility for any errors that may appear in this manual.
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1. Connection to the network

1.1 System requirements

1.1.1 Required equipment preparation

The following equipments are required to connect the projector to your computer through the network.

✓ **Projector**
✓ **LAN cable** (to connect the projector to a network): CAT-5 or greater
✓ **Computer** (minimum 1 set): equipped with the network feature
(100Base-TX or 10Base-T)

1.1.2 Hardware and software requirement for computer

The “LiveViewer” software needs to be installed on all the computers to connect to the projector through a network. To use the “LiveViewer” your computer needs to meet the following requirements.

✓ **OS**: One of the following.
Windows ® XP Home Edition /Professional Edition (32 bit version only)
Windows Vista ® Home Basic /Home Premium /Business /Ultimate /Enterprise (32 bit version only)
Windows ® 7 Starter /Home Basic /Home Premium /Professional /Ultimate / Enterprise (32 bit version only)
✓ **CPU**: Pentium 4 (2.8 GHz or higher)
✓ **Graphic card**: 16 bit, XGA or higher
* When using the “LiveViewer” it is recommended that the display resolution of your computer is set to 1024 x 768.
✓ **Memory**: 512 MB or higher
✓ **Hard disk space**: 100 MB or higher
✓ **Web browser**: Internet Explorer ® 6.0 or higher
✓ **CD-ROM drive**

NOTE • The network communication control is disabled while the projector is in standby mode if the STANDBY MODE item is set to SAVING. Please connect the network communication to the projector after setting the STANDBY MODE to NORMAL. (📖***SETUP menu in the User’s Manual – Operating Guide***)
• You can get the latest version of the “LiveViewer” and the latest information for this product from our website. (📖**7**)
• Depending on the specification of your computer, the computer may slow down due to high CPU usage when the “LiveViewer” is running.
• The “LiveViewer” does not work on Windows Vista® that is not updated to Service Pack 1 or later. Please install the latest Service Pack on your Windows Vista®.

1.1 System requirements (continued)

NOTE • Referring to the manual of your computer or Windows, select the following or a smaller display resolution for the computer.
CP-X4021N, CP-X5021N: 1024 x 768 (XGA)
CP-WX4021N: 1280 x 800
When a resolution larger than the specified resolution is selected, the projector will convert and display in the specified resolution, and the display speed may become faster. If your computer does not support the display resolution specified above, a smaller resolution that is the largest among the resolutions that are supported by the computer will be selected.

• Images might not been transmitted, caused by OS version or the driver software for Network Adapter on your computers. It is highly recommended that OS and the driver should be updated to the latest.

1.2 Installing the “LiveViewer”

1.2.1 Installing the “LiveViewer”

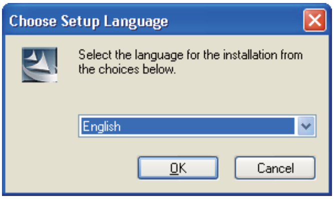
The “LiveViewer” software needs to be installed on all the computers to connect to the projector through a network.

You need to log in as an administrator user to install the software.

1) Turn on the computer.
2) Shut down all applications.
3) Insert the accompanying CD-ROM into the computer's CD-ROM drive.

NOTE • After sequence 3), the User Account Control (UAC) dialog will appear (if you are using Windows Vista or Windows ® 7). Please click the **[Allow]** to continue installation.

4) After a moment, the Choose Setup Language dialog will appear as shown on the right. Select what you like to use in the list, and click the **[OK]**.



Select the language for the installation from the choices below.

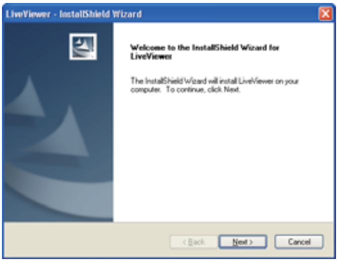
English

NOTE • If the Choose Setup Language dialog doesn't appear, proceed as follows:
(1) Click on the **[Start]** button on the toolbar and select the “Run”.
(2) Enter E:\software\setup.exe and then press the **[OK]**.

If your CD-ROM drive is not drive E on your computer, you will need to replace E with the correct drive letter assigned to your CD-ROM drive.

If the software has been already installed, Uninstallation will be done. Click the **[Cancel]** button, then uninstallation will be canceled. If you uninstalled the software by miss-operation, please re-install the software from first procedure.

5) After a moment, the Welcome dialog will appear as shown on the right. Press the **[Next]**.

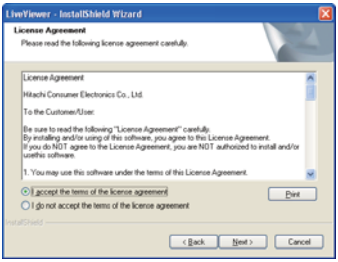


Welcome to the InstallShield Wizard for LiveViewer

The InstallShield Wizard will install LiveViewer on your computer. To continue, click Next.

1.2 Installing the "LiveViewer" (continued)

6) The License Agreement dialog appears. If you accept it, select "I accept the terms of the license agreement" and press the **[Next]**.



License Agreement

Please read the following license agreement carefully.

License Agreement

Hitachi Consumer Electronics Co., Ltd.

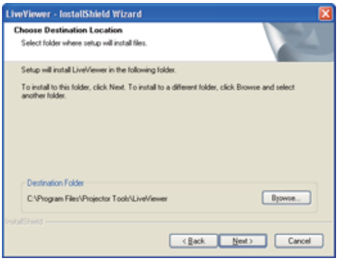
To the Customer/User:

Be sure to read the following "License Agreement" carefully.
By installing and/or using of this software, you agree to this License Agreement.
If you do NOT agree to the License Agreement, you are NOT authorized to install and/or usethis software.

1. You may use this software under the terms of this License Agreement.

● I accept the terms of the licence agreement
○ I do not accept the terms of the licence agreement

7) The Choose Destination Location dialog appears. Press the **[Next]**.



Choose Destination Location

Select folder where setup will install files.

Setup will install LiveViewer in the following folder.

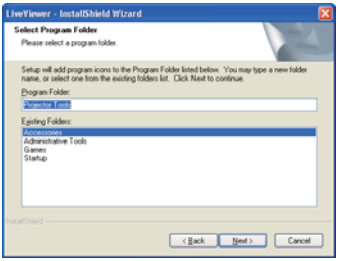
To install to this folder, click Next. To install to a different folder, click Browse and select another folder.

Destination Folder

C:\Program Files\Projector Tools\LiveViewer

NOTE • The C:\Program Files\Projector Tools\LiveViewer folder will be created and the program will be installed into that folder. If you wish to install to a different folder, click the **[Browse]** and select another folder.

8) Confirm the program folder name. If "Projector Tools" is okay, press the **[Next]** to continue. If not, enter the desired folder name and then press the **[Next]**.



Select Program Folder

Please select a program folder.

Setup will add program icons to the Program Folder listed below. You may type a new folder name, or select one from the existing folders list. Click Next to continue.

Program Folder:

Projector Tools

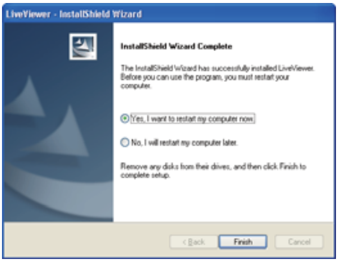
Existing Folders:

Accessories
Administrative Tools
Games
Startup

9) The Hardware Installation dialog appears. Press Continue Anyway.

NOTE • After sequence 8), the Windows Security dialog will appear if you are using Windows Vista or Windows® 7. Please click the **[Install this driver software anyway]** and continue installation.

10) After a moment, installation will complete and the Setup Complete dialog will appear as shown on the right. Click the **[Finish]**. This completes the software installation. Then your computer automatically restarts.
    (1) To confirm that the software has been properly installed, press the **[Start]** button on the toolbar, select All Programs and then select the Projector Tools folder.
    (2) The "LiveViewer" will appear in that folder if the installation was successful.



InstallShield Wizard Complete

The InstallShield Wizard has successfully installed LiveViewer. Before you can use the program, you must restart your computer.

● Yes, I want to restart my computer now.
○ No, I will restart my computer later.

Remove any disks from their drives, and then click Finish to complete setup.

1.2.2 Updating the "LiveViewer"

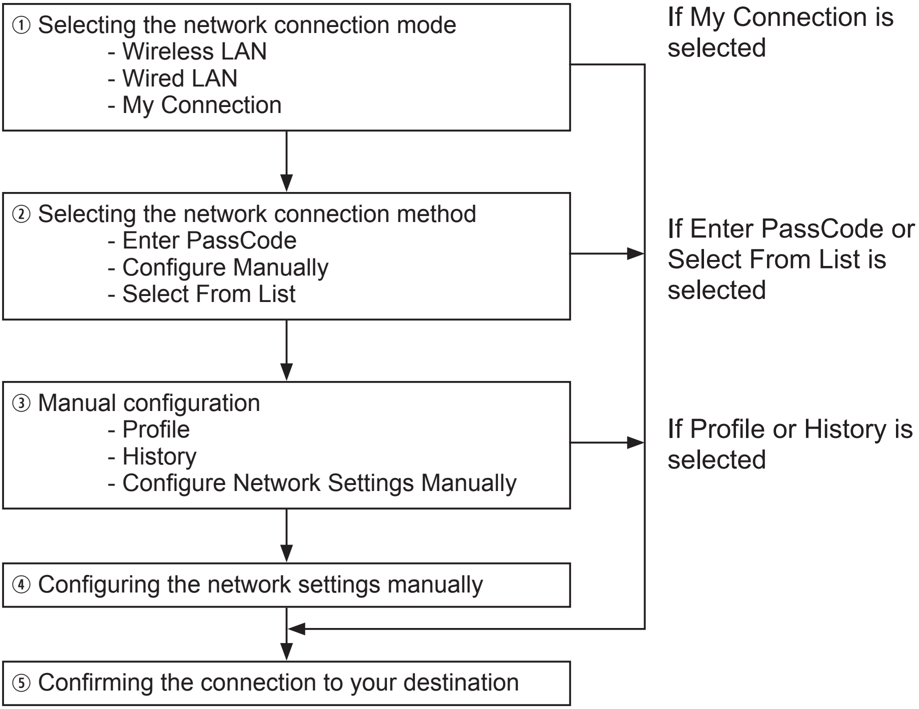
Please check and get the latest version at Hitachi Web site.
http://www.hitachi-america.us/digitalmedia or http://www.hitachidigitalmedia.com
Some functions explained in this manual require the "LiveViewer" Version 4.xx. (In the version information a number between 00 and 99 will replace the xx.)

1.3 Process to connect the network

Before connecting your computer and projector via a network, make sure that the **LAN** port is selected as the input source on the projector. (📖***Operating in the User's Manual – Operating Guide***) Otherwise a connection cannot be established.

1.3.1 Process overview

An overview of the process to connect your computer and the projector via a network is shown below.
The "LiveViewer" allows you to skip some of the steps below to establish a network connection quickly and easily.


① Selecting the network connection mode
- Wireless LAN
- Wired LAN
- My Connection
If My Connection is selected
② Selecting the network connection method
- Enter PassCode
- Configure Manually
- Select From List
If Enter PassCode or Select From List is selected
③ Manual configuration
- Profile
- History
- Configure Network Settings Manually
If Profile or History is selected
④ Configuring the network settings manually
⑤ Confirming the connection to your destination

NOTE • Wireless LAN can be selected only when an access point to convert wireless LAN to wired LAN exists between your computer and the projector.
• Up to 30 computers can be simultaneously connected to the projector through a network.

1.3 Process to connect the network (continued)

1.3.2 Starting the “LiveViewer”

Start the “LiveViewer” in your computer, taking one of the followings.

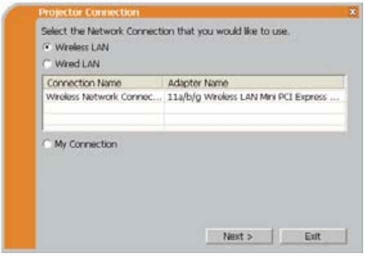
1) Double click the “LiveViewer” icon on the Desktop in your computer
2) Select “Start” → “All Programs” → “Projector Tools” → “LiveViewer” on Windows menu.

Then, proceed to item **1.4 Selecting the network connection mode**. (📖*10*)

1.4 Selecting the network connection mode

After starting the “LiveViewer”, the “Select the Network Connection” screen comes up.
Select the network connection that you would like to use. There are 3 options in the menu.

- Wireless LAN
- Wired LAN
- My Connection



Select the Network Connection that you would like to use.

● Wireless LAN
○ Wired LAN

Connection Name	Adapter Name
Wireless Network Connec...	11a/b/g Wireless LAN Mini PCI Express ...

○ My Connection

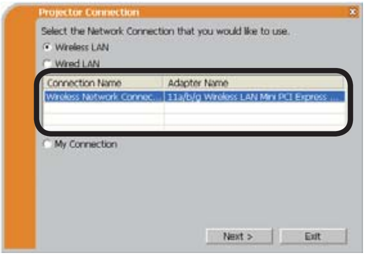
If you select either the wireless LAN or wired LAN, proceed to item **1.4.1 Selecting either the wireless LAN or wired LAN**. (📖***below***)
If you select My Connection, jump to item **1.4.2 Selecting My Connection**. (📖***12***)

NOTE • This dialog will not be displayed if the computer has just one network adapter and no My Connection is registered. Proceed to item **1.5 Selecting the network connection method**. (📖***14***)
• Select Wireless LAN only when you connect the computer and the access point via wireless network and connect the access point and the projector via wired network, since the projector doesn't have wireless LAN function.

1.4.1 Selecting either the wireless LAN or wired LAN

If you select either the wireless LAN or wired LAN, a list of the network adapters in your computer is shown in the menu.

Select what you like to use in the list, and click the **[Next]**.
Then, proceed to item **1.5 Selecting the network connection method**. (📖***14***)



Select the Network Connection that you would like to use.

● Wireless LAN
○ Wired LAN

Connection Name	Adapter Name
Wireless Network Connec...	11a/b/g Wireless LAN Mini PCI Express ...

○ My Connection

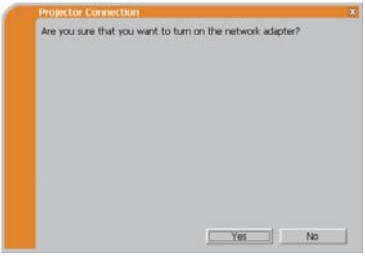
NOTE • If you select the wireless LAN, the wireless LAN adapters in your computer are shown in the list.
• If the wired LAN is selected, the wired LAN adapters in your computer are shown.

[Troubleshooting]

■ Are you sure that you want to turn on the network adapter?

The screen is displayed in the case that the selected network adapter is invalid.

- To turn it on, click the **[Yes]**, and then proceed to item **1.5**. (📖***14***)
- Not to turn it on, click the **[No]**, and then the screen is back to the previous one to select another network adapter. If no more adapter in your computer, the “LiveViewer” will be closed.



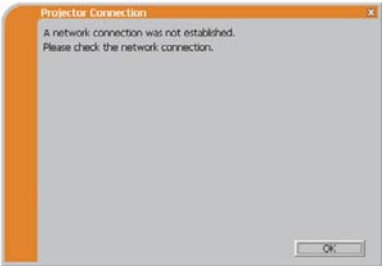
Are you sure that you want to turn on the network adapter?

1.4 Selecting the network connection mode (continued)

■ A network connection was not established.

The screen is displayed in the case that the projector is not connected with a LAN cable to your computer when the wired LAN is selected.

Be sure that the projector is connected with a LAN cable to your computer.



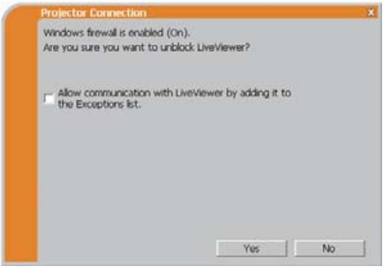
A network connection was not established.
Please check the network connection.

Click the **[OK]**, then the screen is back to the previous one to select the network connection mode.

■ Windows firewall is enabled (On).

The screen is displayed in the case that the firewall setting is activated, and the “LiveViewer” is blocked by the firewall.

- To turn it disabled (Off), click the **[Yes]**.
- Not to turn it disabled (Off), click the **[No]**, but the projector may not be able to communicate with your computer through the network.
- If you put a check mark in the **[Allow communication with LiveViewer by adding it to the Exceptions list]** box, the “LiveViewer” will never be blocked by Windows firewall.



Windows firewall is enabled (On).
Are you sure you want to unblock LiveViewer?

☐ Allow communication with LiveViewer by adding it to the Exceptions list.

Proceed to item **1.5 Selecting the network connection method**. (📖*14*)

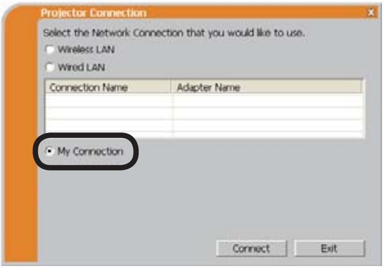
NOTE • If you click the **[Yes]**, the network access by the “LiveViewer” is temporally permitted by Windows firewall, until the “LiveViewer” is closed.
• If any application software having the firewall function is installed into you computer, make the firewall function invalid with following the user’s manual.

1.4 Selecting the network connection mode (continued)

1.4.2 Selecting My Connection

Select the **[My Connection]** and click the **[Connect]**.

If you select the My Connection, the computer is connected to the projector through the network by using the profile data that is pre-assigned to My Connection. (📖*35*)
When you select the My Connection, the computer immediately starts the connection to the projector.



Select the Network Connection that you would like to use.

○ Wireless LAN
○ Wired LAN

● My Connection

Proceed to item **1.8 Confirming the connection to your destination**. (📖*30*)

NOTE • If the DHCP is set on in the projector, the network connection between the projector and computer may not be established since IP address may be varied. If you like to use the My Connection, set the DHCP off in the projector.
• If no profile data is assigned to the My Connection, it can’t be used.

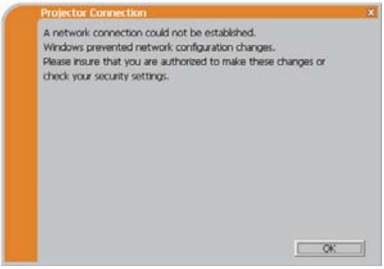
[Troubleshooting]

■ A network connection could not be established.

Windows prevented network configuration changes.

You may log in the Windows under User authority.

Click the **[OK]** to return to the screen to select the network connection mode. (📖*10*)

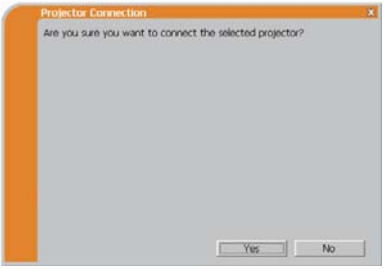


A network connection could not be established.
Windows prevented network configuration changes.
Please insure that you are authorized to make these changes or check your security settings.

Consult to the network administrator and log in again under the Administrator authority. After that, please resume at item **1.3.2 Starting the “LiveViewer”**. (📖*9*)

1.4 Selecting the network connection mode (continued)

■ Are you sure you want to connect the selected projector?



Are you sure you want to connect the selected projector?

The message is appeared when the wireless adapter you selected is already used for another network connection.

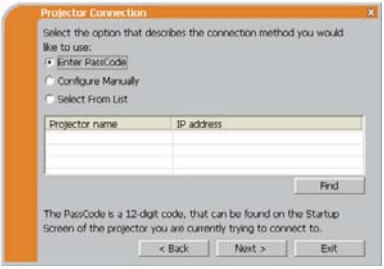
- To connect, click the **[Yes]**. Proceed to item **1.8 Confirming the connection to your destination**. (📖*30*)
- Not to connect, click the **[No]** to return to the screen to select the network connection mode. (📖*10*)

1.5 Selecting the network connection method

There are some options to connect to the network.

- Enter PassCode
- Configure Manually
- Select From List

Select one of them to meet your requirement.



Select the option that describes the connection method you would like to use:

● Enter PassCode
○ Configure Manually
○ Select From List

The PassCode is a 12-digit code, that can be found on the Startup Screen of the projector you are currently trying to connect to.

Enter PassCode
If you want to use the Passcode for network connection, select the **[Enter PassCode]** and click the **[Next]**.

The Passcode is given by the projector on screen. And you simply input the Passcode to the “LiveViewer” to connect the network.
Proceed to item **1.5.1 Passcode connection**. (📖*15*)

Configure Manually
Select the **[Configure Manually]** and click the **[Next]**.
Then, proceed to item **1.6 Manual Configuration**. (📖*23*)

Select From List
Before selecting this item, your computer and the projectors need to be connected to the same network.
If the connection is already established, select the **[Select From List]**.
From the list of the projectors connected to the network, select which projector you would like to send your images. Proceed to **1.8 Confirming the connection to your destination**. (📖*30*)

1.5 Selecting the network connection method (continued)

1.5.1 Passcode connection

The unique Passcode system brings you very quick and simple connection to the network.
The Passcode is a code that expresses the network setting in the projector. If you input the code in the “LiveViewer” in your computer, the network setting in the projector and computer can be matched and the connection will be established immediately.
The section is intended to explain how to use the Passcode.

(1) Getting the Passcode

The Passcode is 12-digit code consisting of alphanumeric characters (“1-9” and “A-Z”).
Example: PASSCODE 1234-5678-9ABC
The Passcode is given on the projector when the **LAN** port is selected as input source.

NOTE • The Passcode system does not work under the condition below. If such is the case, establish the connection manually.
1) Subnet mask is not Class A or B or C.
The Passcode system accepts Class A, B and C only.
Class A:(255.0.0.0), ClassB:(255.255.0.0), Class C:(255.255.255.0)

There are two methods to get the Passcode from the projector

Method 1

1) Turn on the projector, and make sure that the projector image is on screen.
2) Press the **COMPUTER** button on the remote control or **INPUT** button on the projector to select the LAN as input port.
If there is no signal on the **LAN** port, you can find the Passcode on screen.

1.5 Selecting the network connection method (continued)

Method 2

1) Turn on the projector, and make sure that the projector image is on screen.
2) Press the **MENU** button on the remote control or the ▲/▼/◄/► buttons on the projector to show the menu on screen.
3) Use the ▲/▼ cursor buttons to select the Go to Advanced Menu..., and use the ► cursor button to enter the item.
4) Use the ▲/▼ cursor buttons to select the NETWORK, and use the ► cursor button to enter the item.
5) Use the ▲/▼ cursor buttons to select the INFORMATION, and use the ► cursor button to display the INFORMATION.
6) The Passcode appears in the INFORMATION window.

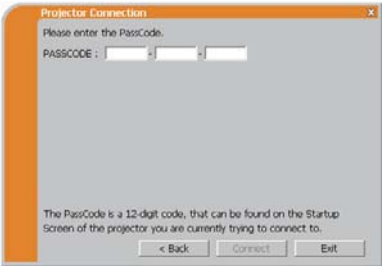
NOTE • Take the method 2 when you project your computer image by the “LiveViewer”, or when the **LAN** port is not selected as input source.
• If no communication between the projector and computer in 5 minutes, the Passcode will be changed.

1.5 Selecting the network connection method (continued)

(2) Entering the Passcode

If you select **[Enter PassCode]** at item **1.5**, the “Please enter the PassCode” screen is displayed. Please enter the Passcode divided 4-digit each in 3 boxes (total 12-digit).

Example PASSCODE: 1234 - 5678 - 9ABC



Please enter the PassCode.

PASSCODE : ☐ - ☐ - ☐

The PassCode is a 12-digit code, that can be found on the Startup Screen of the projector you are currently trying to connect to.

After entering the Passcode, click the **[Connect]** to start the connection to the projector.

Proceed to item **1.8 Confirming the connection to your destination**. (📖*30*)

If you click the **[Back]**, the screen is back to item **1.5 Selecting the network connection method**. (📖*14*)

NOTE • When entering the Passcode, capital and small letters are not distinguished.
• If you are using a Subnet mask other than Class A, B or C, you will have to establish the connection manually.
If the manual setting screen is displayed, please follow item **1.5.1 (3)**. (📖*21*)

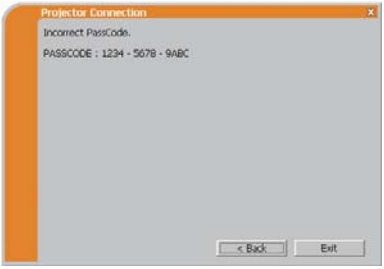
[Troubleshooting]

■ Incorrect PassCode.

The incorrect Passcode was input.

Click the **[Back]** to return to the “Please enter the PassCode” screen.

Check the PassCode on the projector screen (📖*15*) and enter the code again.

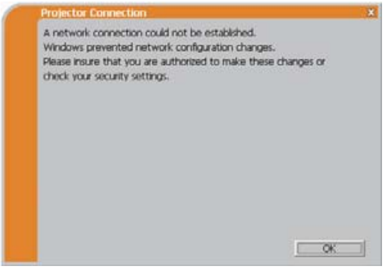


Incorrect PassCode.

PASSCODE : 1234 - 5678 - 9ABC

1.5 Selecting the network connection method (continued)

■ A network connection could not be established.



A network connection could not be established.
Windows prevented network configuration changes.
Please insure that you are authorized to make these changes or check your security settings.

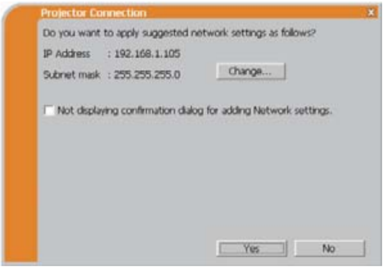
Windows prevented network configuration changes.

You may log in the Windows under User authority.

Click the **[OK]**, then the “LiveViewer” main menu is displayed even though the network is not established. Click 🖧 on the main and go back to item **1.5 Selecting the network connection method**. (📖*14*)

Consult to the network administrator. Log in the Windows under Administrator authority. After that, please resume at item **1.3.2 Starting the “LiveViewer”**. (📖*9*)

■ If you need to add a Network configuration on your computer to connect to the projector.



Do you want to apply suggested network settings as follows?
IP Address : 192.168.1.105
Subnet mask : 255.255.255.0
☐ Not displaying confirmation dialog for adding Network settings.

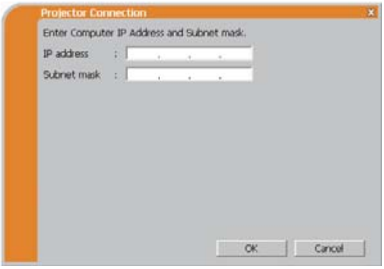
This dialog will be displayed when you need to add a Network configuration on your computer to connect to the projector. Confirm with your network administrator if the Network configuration displayed on the dialog is OK, and then click the **[Yes]**.

Click the **[NO]**, then the “LiveViewer” main menu is displayed even though the network is not established. Click 🖧 on the main menu and go back to item **1.5 Selecting the network connection method**. (📖*14*)

1.5 Selecting the network connection method (continued)

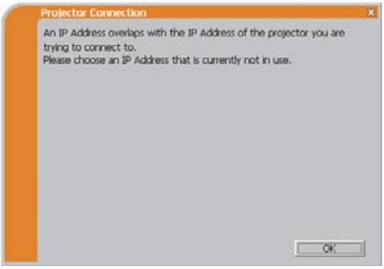
If you put a check mark in the box “Not displaying confirmation dialog for adding Network settings”, the projector memorizes current configuration and this dialog is not displayed again. To display this dialog again, click Option 🔧 icon in the “LiveViewer” main menu and remove the check mark in the box “Not displaying confirmation dialog for adding Network settings”.

If you want to change the Network configuration to add, click the **[Change]**. A dialog for changing the Network configuration as shown to the right will be displayed. Enter IP address and subnet mask , then click the **[OK]**. Procedure to connect to the projector will start.
Proceed to item **1.8 Confirming the connection to your destination**. (📖*30*)
If you click the **[Cancel]**, you will return to the dialog for adding a Network configuration.



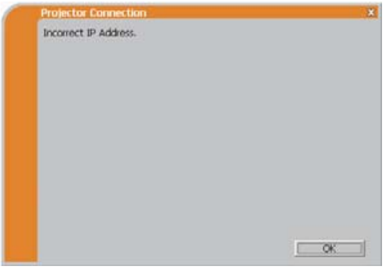
Enter Computer IP Address and Subnet mask.

If the entered IP address and projector's IP address are the same, a warning dialog shown to the right will be displayed.
Click the **[OK]**, and then enter a different IP address from the projector's one in the dialog for changing Network configuration.



An IP Address overlaps with the IP Address of the projector you are trying to connect to.
Please choose an IP Address that is currently not in use.

If the connection is not available with the entered Network configuration, a warning dialog shown to the right will be displayed.
Click the **[OK]** to return to the dialog for changing the Network configuration, and then enter appropriate configuration.



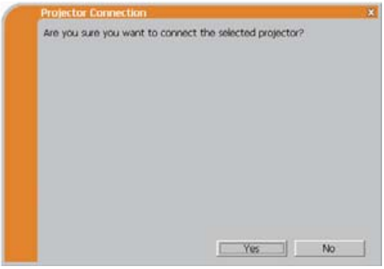
Incorrect IP Address.

NOTE • If a Network configuration to connect to the projector has been added on the computer, the added Network configuration will be erased once the application software is closed.

1.5 Selecting the network connection method (continued)

■ Are you sure you want to connect the selected projector?

The message is appeared when the wireless adapter you selected is already used for another network connection.



Are you sure you want to connect the selected projector?

- To connect, click the **[Yes]**. Proceed to item **1.8 Confirming the connection to your destination**. (📖*30*)
- Not to connect, click the **[No]** then the “LiveViewer” main menu is displayed even though the network is not established. Click on the main menu to go back to item **1.5 Selecting the network connection method**. (📖*14*)

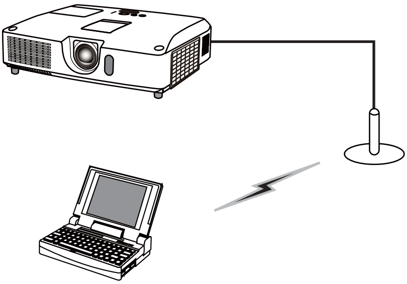
1.5 Selecting the network connection method (continued)

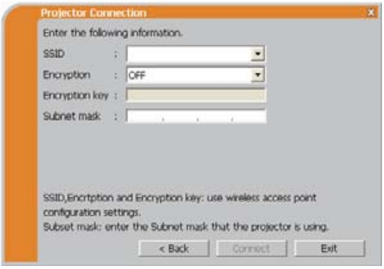
(3) Configuring manually

After entering the Passcode (📖*17*), you are required to enter the network configuration manually if you use a Subnet mask other than Class A, B or C. (📖*15*) If you use the wired LAN, go to (📖*22*).

Wireless LAN

The projector is required to be connected to an access point by a LAN cable.





Enter the following information.

Encryption : OFF

SSID,Encrtption and Encryption key: use wireless access point configuration settings.
Subset mask: enter the Subnet mask that the projector is using.

1) The setting on the access point. ***1***
   Enter the following information.
      SSID : WirelessAccessPoint (example)
      Encryption: WEP64bit (example)
      Encryption key ***2***: ********** (example)

2) The setting on the projector. ***3***
   Enter the following information.
      Subnet mask ***4***: 255.255.255.128 (example)

3) Click the **[Connect]**.

4) The wireless connection will be established.
   Proceed to item **1.8 Confirming the connection to your destination**. (📖*30*)

1 Contact the network administrator to find out the setting on the access point.
2 If you use an encryption, you need to set it. Contact the network administrator to check the encryption key that is set in the projector.
The encryption key is always shown as “**********”.
3 To find the network setting on the projector, refer to the NOTE. (📖*22*)
4 If you use Subnet mask except Class A/B/C, please set it.

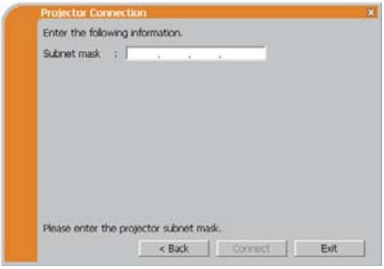
1.5 Selecting the network connection method (continued)

Wired LAN

1) Enter the following information for the projector.
   Subnet mask ***1**: 255.255.255.128
   (example)

2) Click the **[Connect]**.

3) The network connection will be established. Proceed to item **1.8 Confirming the connection to your destination**. (📖*30*)



Projector Connection

Enter the following information.

Subnet mask :

Please enter the projector subnet mask.

***1** If you use a Subnet mask other than Class A, B or C, this screen appears.

NOTE • If you require the network setting information on the projector, take the following procedure to find it out.

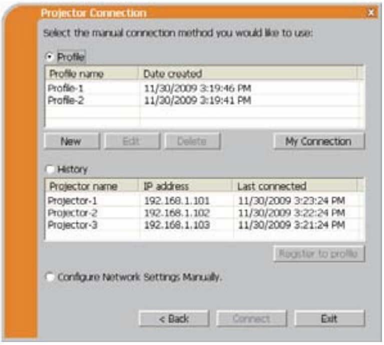
1) Turn on the projector, and make sure that the projector image is on screen.
2) Press the **MENU** button on the remote control or the ▲/▼/◄/► buttons on the projector to show the menu on screen.
3) Use the ▲/▼ cursor buttons to select the Go to Advanced Menu..., and use the ► cursor button to enter the item.
4) Use the ▲/▼ cursor buttons to select the NETWORK, and use the ► cursor button to enter the item.
5) Use the ▲/▼ cursor buttons to select the INFORMATION, and push the ► cursor button.
6) The setting will be displayed in the NETWORK_INFORMATION-box.

1.6 Manual configuration

There are 3 options for the manual configuration.

- Profile (📖*below*)
- History (📖*24*)
- Configure Network Settings Manually (📖*25*)

If you select Configure Network Settings Manually, proceed to item **1.7 Configuring the network settings manually**. (📖*25*)



Select the manual connection method you would like to use:

● Profile

Profile name	Date created
Profile-1	11/30/2009 3:19:46 PM
Profile-2	11/30/2009 3:19:41 PM

○ History

Projector name	IP address	Last connected
Projector-1	192.168.1.101	11/30/2009 3:23:24 PM
Projector-2	192.168.1.102	11/30/2009 3:22:24 PM
Projector-3	192.168.1.103	11/30/2009 3:21:24 PM

○ Configure Network Settings Manually.

1.6.1 Profile connection

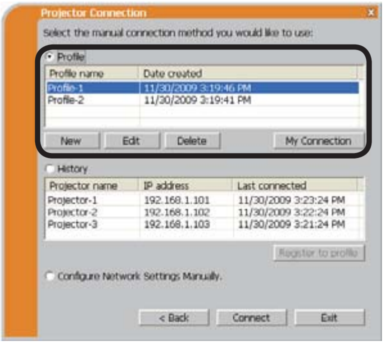
Selecting a profile data connect the network with the projector.
It is required to store the profile data in advance. (📖*33*)

1) Select the **[Profile]**.

2) Choose a profile data listed in the window.

3) Click the **[Connect]**.

4) The network connection will be established. Proceed to item **1.8 Confirming the connection to your destination**. (📖*30*)



Select the manual connection method you would like to use:

● Profile

Profile name	Date created
Profile-1	11/30/2009 3:19:46 PM
Profile-2	11/30/2009 3:19:41 PM

○ History

Projector name	IP address	Last connected
Projector-1	192.168.1.101	11/30/2009 3:23:24 PM
Projector-2	192.168.1.102	11/30/2009 3:22:24 PM
Projector-3	192.168.1.103	11/30/2009 3:21:24 PM

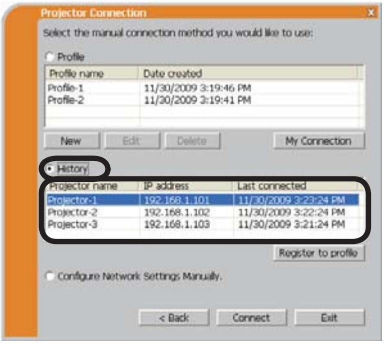
○ Configure Network Settings Manually.

NOTE • To check the setting in a profile data, follow the process below.
1) Choose a profile data that you want to check.
2) Move the mouse cursor to the profile data, and click the right button on the mouse to display a pop-up menu.
3) Select the “Property” in the pop-up menu, and click the left button on the mouse.
4) The setting information of the selected profile data is shown.
• If the DHCP is set on in the projector, the network connection between the projector and computer may not be established since IP address may be varied. If you like to use the Profile connection, set the DHCP off in the projector.

1.6 Manual configuration (continued)

1.6.2 History connection

The “LiveViewer” can memory the network settings when connecting to the projector as a history record. After that, selecting a history record can quickly connect the network with the projector.



Select the manual connection method you would like to use:

○ Profile

Profile name	Date created
Profile-1	11/30/2009 3:19:46 PM
Profile-2	11/30/2009 3:19:41 PM

● History

Projector name	IP address	Last connected
Projector-1	192.168.1.101	11/30/2009 3:23:24 PM
Projector-2	192.168.1.102	11/30/2009 3:22:24 PM
Projector-3	192.168.1.103	11/30/2009 3:21:24 PM

○ Configure Network Settings Manually.

1) Select the **[History]**.

2) Choose a history record listed in the window.

3) Click the **[Connect]**.

4) The network connection will be established.
Proceed to item **1.8 Confirming the connection to your destination**. (📖*30*)

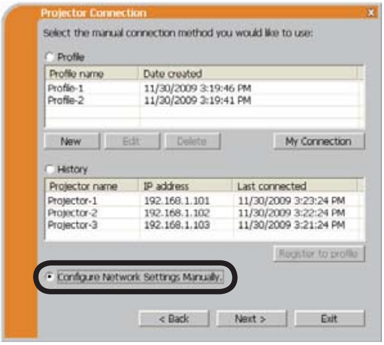
If you want to copy a history record to a profile data, select one of the history record and click the **[Register to profile]**. The profile data cannot be erased automatically.

NOTE • The number of the history record is maximum 10 for each network adapter. When the 11th data is stored, the oldest record among the 10 will be overwritten.
• The date & time information in each history record is renewed when the network is connected by using the history record.
• If the DHCP is set on in the projector, the network connection between the projector and computer may not be established since IP address may be varied.
• Even if you use the profile connection, it will be memorized as a history record.

1.7 Configuring the network settings manually

All setting for the network connection between the projector and computer is input manually.

Select the **[Configure Network Settings Manually]**.



Projector Connection

Select the manual connection method you would like to use:

○ Profile

Profile name	Date created
Profile-1	11/30/2009 3:19:46 PM
Profile-2	11/30/2009 3:19:41 PM

○ History

Projector name	IP address	Last connected
Projector-1	192.168.1.101	11/30/2009 3:23:24 PM
Projector-2	192.168.1.102	11/30/2009 3:22:24 PM
Projector-3	192.168.1.103	11/30/2009 3:21:24 PM

● Configure Network Settings Manually.

The information to be input manually is different, depending on how you want to connect the projector and computer.

Wireless LAN

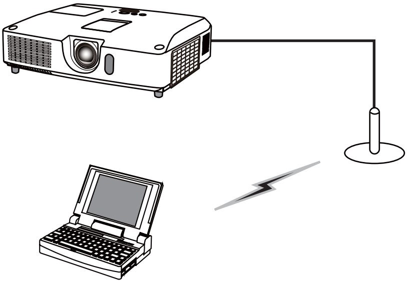
The projector is required to be connected to an access point by a LAN cable. Go to (📖*26*).

Wired LAN

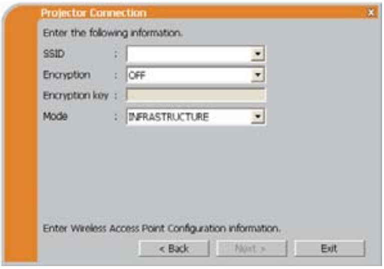
If you use the wired LAN, go to (📖*27*).

1.7 Configuring the network settings manually (continued)

Wireless LAN



1) The setting on the access point. ***1***
   Enter the following information.
   SSID: WirelessAccessPoint (example)
   Encryption: WEP64bit (example)
   Encryption key ***2***: ********** (example)
   Mode: INFRASTRUCTURE



Projector Connection

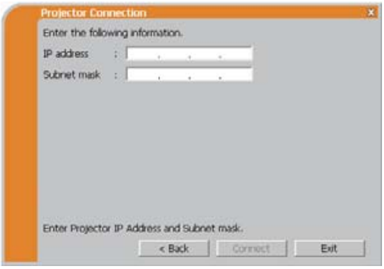
Enter the following information.

SSID :
Encryption : OFF
Encryption key :
Mode : INFRASTRUCTURE

Enter Wireless Access Point Configuration information.

2) Click the **[Next]**.

3) Enter the following information that is set in the projector. ***3***
   IP address : 192.168.1.10 (example)
   Subnet mask: 255.255.255.0 (example)



Projector Connection

Enter the following information.

IP address :
Subnet mask :

Enter Projector IP Address and Subnet mask.

4) Click the **[Connect]**.

5) The wireless connection will be established.
   Proceed to item **1.8 Confirming the connection to your destination**. (📖***30***)

1 Contact the network administrator to find out the setting on the access point.

2 If you use an encryption, you need to set it. Contact the network administrator to check the encryption key that is set in the projector.
The encryption key is always shown as "**********".

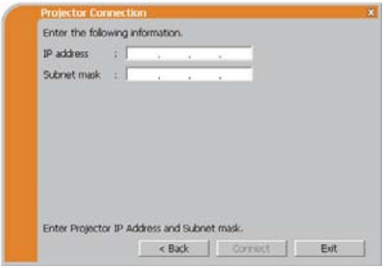
3 To find the network setting on the projector, refer to the NOTE. (📖***22***)

1.7 Configuring the network settings manually (continued)

Wired LAN

1) Enter the following information for the projector. ***1***

   IP address : 192.168.1.10 (example)
   Subnet mask : 255.255.255.0 (example)



Enter the following information.

Enter Projector IP Address and Subnet mask.

2) Click the **[Connect]**.

3) The network connection will be established.
   Proceed to item **1.8 Confirming the connection to your destination**. (📖*30*)

1 To find the network setting on the projector, refer to the NOTE. (📖*22*)

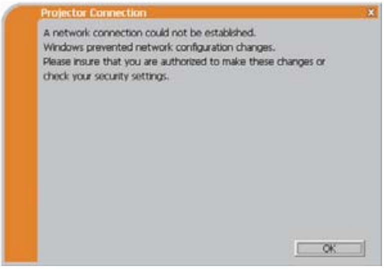
[Troubleshooting]

■ A network connection could not be established.

Windows prevented network configuration changes.

You may log in the Windows under User authority.

Click the **[OK]**, then the “LiveViewer” main menu is displayed even though the network is not established. Click on the main menu and go back to item **1.5 Selecting the network connection method**. (📖*14*)



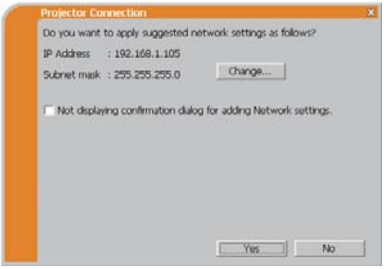
A network connection could not be established.
Windows prevented network configuration changes.
Please insure that you are authorized to make these changes or check your security settings.

Consult to the network administrator. Log in the Windows under Administrator authority. After that, please resume at item **1.3.2 Starting the “LiveViewer”**. (📖*9*)

1.7 Configuring the network settings manually (continued)

■ If you need to add a Network configuration on your computer to connect to the projector.

This dialog will be displayed when you need to add a Network configuration on your computer to connect to the projector. Confirm with your network administrator if the Network configuration displayed on the dialog is OK, and then click the **[Yes]**.



Do you want to apply suggested network settings as follows?

IP Address : 192.168.1.105

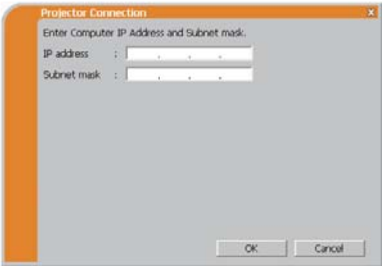
Subnet mask : 255.255.255.0

☐ Not displaying confirmation dialog for adding Network settings.

Click the **[NO]**, then the “LiveViewer” main menu is displayed even though the network is not established. Click ▦ on the main menu and go back to item **1.5 Selecting the network connection method**. (📖*14*)

If you put a check mark in the box “Not displaying confirmation dialog for adding Network settings”, the projector memorizes current configuration and this dialog is not displayed again. To display this dialog again, click Option 🔧 icon in the “LiveViewer” main menu and remove the check mark in the box “Not displaying confirmation dialog for adding Network settings”.

If you want to change the Network configuration to add, click the **[Change]**. A dialog for changing the Network configuration as shown to the right will be displayed. Enter IP address and subnet mask , then click the **[OK]**. Procedure to connect to the projector will start.
Proceed to item **1.8 Confirming the connection to your destination**. (📖*30*)
If you click the **[Cancel]**, you will return to the dialog for adding a Network configuration.



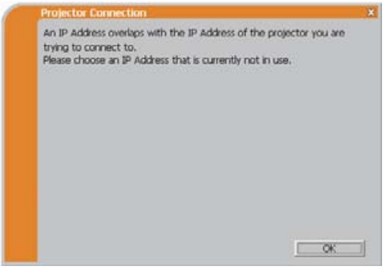
Enter Computer IP Address and Subnet mask.

IP address :

Subnet mask :

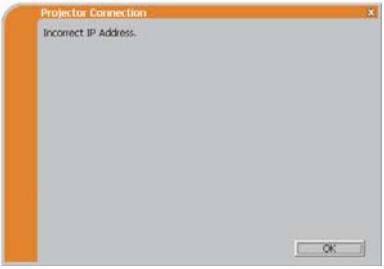
1.7 Configuring the network settings manually (continued)

If the entered IP address and projector's IP address are the same, a warning dialog shown to the right will be displayed.
Click the **[OK]**, and then enter a different IP address from the projector's one in the dialog for changing Network configuration.



An IP Address overlaps with the IP Address of the projector you are trying to connect to.
Please choose an IP Address that is currently not in use.

If the connection is not available with the entered Network configuration, a warning dialog shown to the right will be displayed.
Click the **[OK]** to return to the dialog for changing the Network configuration, and then enter appropriate configuration.

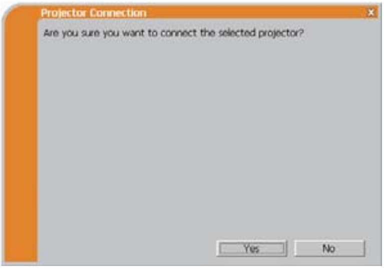


Incorrect IP Address.

NOTE • If a Network configuration to connect to the projector has been added on the computer, the added Network configuration will be erased once the application software is closed.

■ Are you sure you want to connect the selected projector?

The message is appeared when the wireless adapter you selected is already used for another network connection.



Are you sure you want to connect the selected projector?

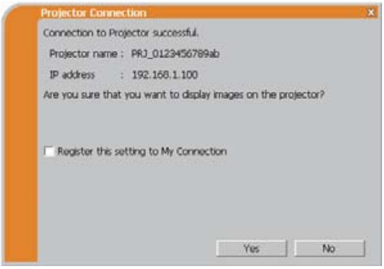
- To connect, click the **[Yes]**. Proceed to item **1.8 Confirming the connection to your destination**. (📖*30*)
- Not to connect, click the **[No]** then the “LiveViewer” main menu is displayed even though the network is not established. Click ▦ on the main menu to go back to item **1.5 Selecting the network connection method**. (📖*14*)

1.8 Confirming the connection to your destination

1.8.1 Connection and transmission

When the network connection is established, the “Connection to Projector successful” screen is displayed.

Make sure that the right projector that you want to send your image to is selected, by checking the projector name and IP address shown in the screen.



Connection to Projector successful.

Projector name : PRJ_0123456789ab

IP address : 192.168.1.100

Are you sure that you want to display images on the projector?

☐ Register this setting to My Connection

- To send images to the projector, click the **[Yes]**. The transmission will be started. To display the transmitted images, select the **LAN** port as input source on the projector.

- Not to send, click the **[No]**, then the “LiveViewer” main menu is displayed in stand-by mode. (Stand-by mode is the state where there is no image transmission, although the network connection is established.)
  The transmission can be started, if you click ▷ or 🖥 button on the “LiveViewer” main menu.

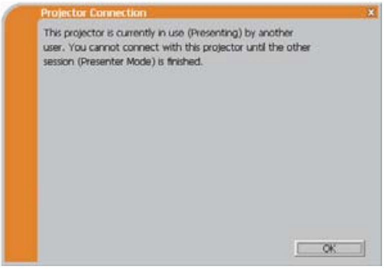
If you wish to use the current connection setting as a profile data for My Connection, check in the box for the **[Register this setting to My Connection]**.

[Troubleshooting]

■ This projector is currently in use (Presenting) by another user.

The projector you want to send your images to is occupied by another computer in the Presenter mode.

Click the **[OK]**, then the “LiveViewer” main menu is displayed in stand-by mode. Retry to send your images, after the Presenter mode is off.



This projector is currently in use (Presenting) by another user. You cannot connect with this projector until the other session (Presenter Mode) is finished.

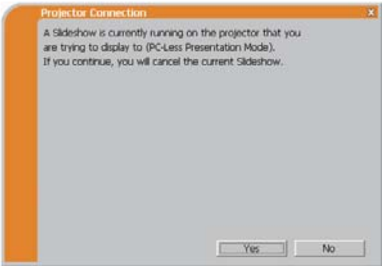
1.8 Confirming the connection to your destination (continued)

■ A Slideshow is currently running on the projector that you are trying to display to.

The projector you want to send your images to is in the Slideshow mode in the PC-LESS Presentation.

- Click the **[Yes]**, then the projector will stop the Slideshow and switch the input source to the **LAN** port.

- Click the **[No]**, then the projector is remained in the Slideshow mode, and the “LiveViewer” main menu is displayed in stand-by mode on your computer.



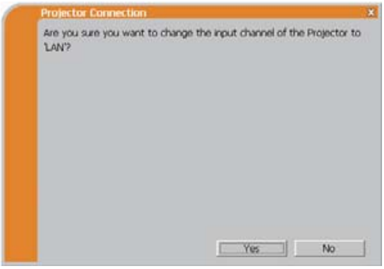
A Slideshow is currently running on the projector that you are trying to display to (PC-Less Presentation Mode).
If you continue, you will cancel the current Slideshow.

■ Are you sure you want to change the input channel of the Projector to LAN?

The projector is not set to the LAN as an input signal.

- Click the **[Yes]**, then the projector is switched to the LAN.

- Click the **[No]**, then the projector is remained as it is, and the “LiveViewer” main menu is displayed in stand-by mode on your computer.

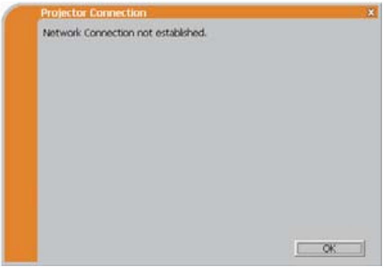


Are you sure you want to change the input channel of the Projector to "LAN"?

1.8 Confirming the connection to your destination (continued)

1.8.2 Connection error

When the connection to the projector could not be established, an error message, “Network Connection not established”, will come up.



Network Connection not established.

Click the **[OK]** then the “LiveViewer” main menu is displayed even though the network is not established. Click ▦ on the main menu to go back to item **1.5 Selecting the network connection method**. (📖*14*)

NOTE • If My Connection is selected and the connection could not be established, the “LiveViewer” main menu will not be displayed. Check the network setting in the projector, and retry the connection from item **1.3.2 Staring the “LiveViewer”**. (📖*9*)

1.9 Profile data

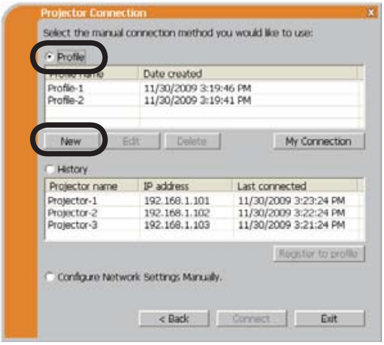
1.9.1 Outline of Profile data

The network setting to connect the projector and computer can be stored as a profile data. Once the data is stored, all you need to do is to select the data to connect to the network. It is recommended when the same network connection is often used.

1.9.2 Making Profile data

The profile data is made on the Manual Configuration screen. (📖*23*)
Up to 10 profile data can be stored for each network adapter.

1) Select the **[Profile]** and click the **[New]**.



Projector Connection

Select the manual connection method you would like to use:

● Profile

Profile name	Date created
Profile-1	11/30/2009 3:19:46 PM
Profile-2	11/30/2009 3:19:41 PM

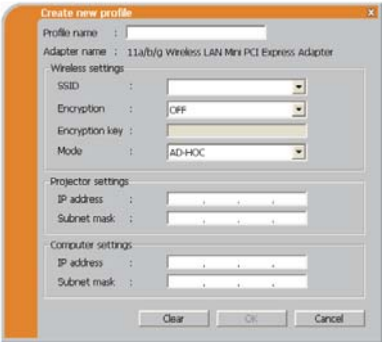
○ History

Projector name	IP address	Last connected
Projector-1	192.168.1.101	11/30/2009 3:23:24 PM
Projector-2	192.168.1.102	11/30/2009 3:22:24 PM
Projector-3	192.168.1.103	11/30/2009 3:21:24 PM

○ Configure Network Settings Manually.

2) The “Create new profile” will come up.
   If you have already made 10 profile data, you cannot make a new one, until you delete a stored data.

   Input all information required for your network connection.
   If you want to clear the information you input, click the **[Clear]**.



Create new profile

Profile name :
Adapter name : 11a/b/g Wireless LAN Mini PCI Express Adapter

Wireless settings
SSID :
Encryption : OFF
Encryption key :
Mode : AD-HOC

Projector settings
IP address : . . .
Subnet mask : . . .

Computer settings
IP address : . . .
Subnet mask : . . .

3) Click the **[OK]**, after all information is set.
   If you don’t want to store it, click the **[Cancel]**.

4) The new profile data is shown in the profile list, if you click the **[OK]**.

NOTE • When you make a new profile data, it is strongly recommended to check that the new dada can work properly by selecting the data at the Profile connection. (📖*23*)
• If you change a network adapter on your computer, make a new profile data for the adapter.

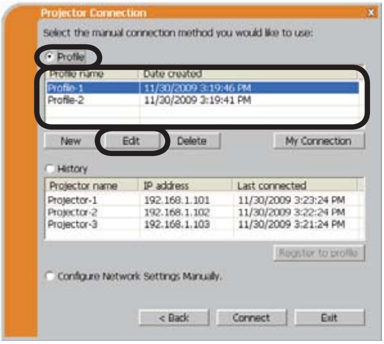
1.9 Profile data (continued)

1.9.3 Editing Profile data

If necessary, the profile data can be edited on the Manual Configuration screen. (📖*23*)

1) Select the **[Profile]**, and select one of the data listed in the window.

2) Click the **[Edit]**.



Select the manual connection method you would like to use:

● Profile

Profile name	Date created
Profile-1	11/30/2009 3:19:46 PM
Profile-2	11/30/2009 3:19:41 PM

○ History

Projector name	IP address	Last connected
Projector-1	192.168.1.101	11/30/2009 3:23:24 PM
Projector-2	192.168.1.102	11/30/2009 3:22:24 PM
Projector-3	192.168.1.103	11/30/2009 3:21:24 PM

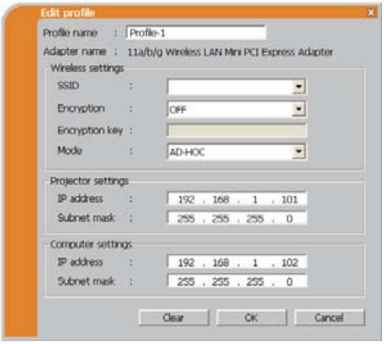
○ Configure Network Settings Manually.

3) The “Edit profile” screen will come up.

4) Edit the information required to be revised. If you want to clear all information in the window, click the **[Clear]**.

5) Click the **[OK]**, after the editing is completed. If you don’t want to store it, click the **[Cancel]**.

6) The edited profile data is stored and shown in the profile list with the new date created information, if you click the **[OK]**.



Profile name : Profile-1
Adapter name : 11a/b/g Wireless LAN Mini PCI Express Adapter

Wireless settings
SSID :
Encryption : OFF
Encryption key :
Mode : AD-HOC

Projector settings
IP address : 192 . 168 . 1 . 101
Subnet mask : 255 . 255 . 255 . 0

Computer settings
IP address : 192 . 168 . 1 . 102
Subnet mask : 255 . 255 . 255 . 0

NOTE • When you edit a profile data, it is strongly recommended to check that the edited data can work properly by selecting the data at the Profile connection. (📖*23*)

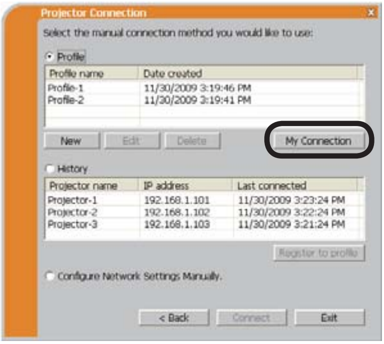
1.9 Profile data (continued)

1.9.4 Registering My Connection

One of the profile data, which is often used, can be registered as the My Connection profile data. Once the data is registered, all you need to do is to select the My Connection to connect to the network. (📖*12*)

1) Click the **[My Connection]**.

2) The “Add My Connection” screen will come up.
   The currently selected profile data for the My Connection is shown with a check mark in the list.



Select the manual connection method you would like to use:

● Profile

Profile name	Date created
Profile-1	11/30/2009 3:19:46 PM
Profile-2	11/30/2009 3:19:41 PM

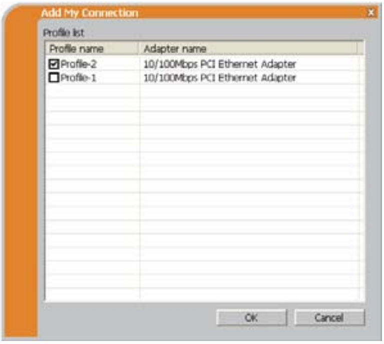
○ History

Projector name	IP address	Last connected
Projector-1	192.168.1.101	11/30/2009 3:23:24 PM
Projector-2	192.168.1.102	11/30/2009 3:22:24 PM
Projector-3	192.168.1.103	11/30/2009 3:21:24 PM

○ Configure Network Settings Manually.

3) Select one of the profile data listed in the window and put a mark in the check box.
   The data selected before is turned unmarked.

4) Click the **[OK]**, then the window is closed.
   If you don’t want to select a new one, click the **[Cancel]**.



Profile list

Profile name	Adapter name
☑ Profile-2	10/100Mbps PCI Ethernet Adapter
☐ Profile-1	10/100Mbps PCI Ethernet Adapter

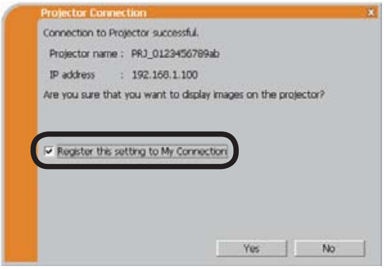
NOTE • If you don’t want to use the My Connection, mark no data listed in the window, and click the **[OK]**.
• In the list, all profile data are shown no matter which network adapter is selected. You can register a profile data that is not for currently selected network adapter as the My Connection profile data.

1.9 Profile data (continued)

Also, you can register a profile data to My Connection, when the network connection is established. When it is established, the “Connection to Projector successful” screen is displayed. (📖*30*)

If you wish to use the current connection setting for My Connection, check in the box for the **[Register this setting to My Connection]**. And then, if it is okay to overwrite the present data for My Connection, click the **[OK]**.

A new profile data will be created and it is registered as My Connection profile data.



Connection to Projector successful.

Projector name : PRJ_0123456789ab

IP address : 192.168.1.100

Are you sure that you want to display images on the projector?

☑ Register this setting to My Connection

NOTE • If there are already 10 profile data, the check box cannot be checked. Please erase one of the existing profile data.

• The profile name for the stored data is assigned by the “LiveViewer” automatically. The name will be shown at the right side of the check box.

2. Network Presentation

2.1 Using the “LiveViewer”

When you get the connection between your projector and computer, the “LiveViewer” main menu will be shown on the computer screen.
On the main menu you can configure settings and operate functions to send your images to the projector.

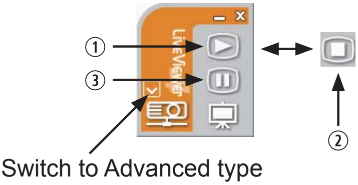
2.1.1 Main menu and Operating buttons

1) Menu Type

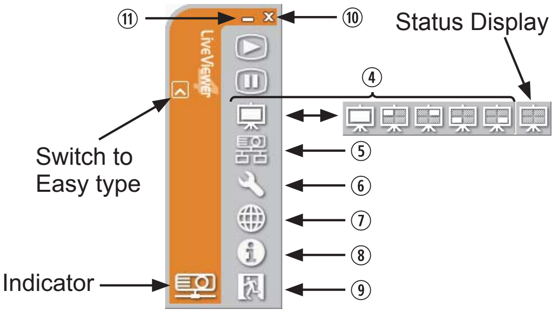
There are 2 type of the main menu, Easy type and Advanced type, which can be switched on screen.

- When the “LiveViewer” is started, the last used type will be on screen.
- When the network connection is not established, the Advanced type will be on screen.

Easy Type



Advanced Type



2) Operating buttons

① **Starting Capture button**
The transmission to the projector is started and the images will be displayed. The Display mode will be the Single PC mode at first. After that, the last Display mode will be applied.

② **Stop button**
The image transmission is stopped.

NOTE • The images may not be displayed on screen, if the Start/Stop buttons are clicked repeatedly.
• The primary image is displayed in multi-display environment.

2.1 Using the “LiveViewer” (continued)

③ **Hold button**
The image on screen is temporally frozen.
The last image before the button is clicked is remained on screen.
You can revise the image data on your computer without showing it on the projector’s screen.

④ **Display mode button** (📖*40*)
The button switches the Single PC mode and Multi PC mode.

⑤ **Connect button**
The screen to select the connection mode is displayed.
Go to item **1.5**. (📖*14*)

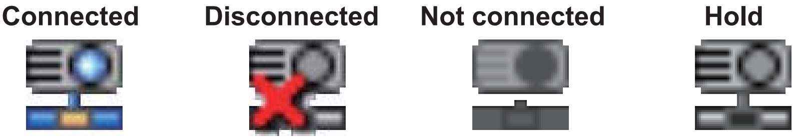
⑥ **Option button**
The option screen is displayed.

⑦ **Web control button**
Starts the Web browser on your computer and displays Web control screen to control the projector and change various settings for the projector. (📖*45*)

⑧ **Information button**
The version of the “LiveViewer” is displayed.

⑨**,** ⑩ **Close button**
The network is disconnected and the “LiveViewer” is closed.

⑪ **Minimize button**
The main menu is closed, and the “LiveViewer” icon is displayed on the task tray in your computer. The displayed icon changes as shown below depending on the status of the “LiveViewer”. If the icon is double-clicked, the last type of the main menu will be shown on screen.

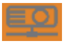
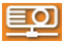
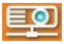
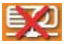


2.1 Using the “LiveViewer” (continued)

2.1.2 Displaying the status

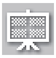
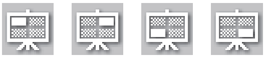
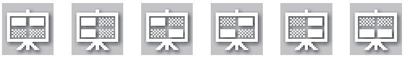
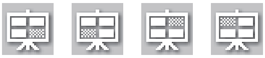
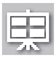
1) Indicator

The indicator shows the following status.

Indicator	Status	Note
	Not connected	The network connection to the projector is not established yet.
	Hold	The network connection is established, but the image transmissions on hold.
	Connected	The network connection is established and the images on the computer are being sent to the projector.
	Disconnected	The network connection to the projector is disconnected.

2) Status Display in Multi PC mode

The icon is displayed at the right end of the Display mode buttons.
One of the following icons to inform which quarter screens are used will be shown.

Status	Status icon
No computer is on screen	
One computer is on screen.	
Two computers are on screen.	
Three computers are on screen.	
Four computers are on screen.	

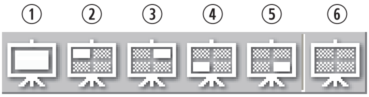
NOTE • The status display is refreshed in every 3 seconds.
• If the status cannot be gotten from the projector, it will not be displayed.

2.1 Using the "LiveViewer" (continued)

2.1.3 Switching the display mode

The "LiveViewer" has the Single PC mode and Multi PC mode. The modes can be switched on the main menu.

1) Click the button on the main menu.
   The buttons below are displayed.



⑥:Status Display

2) Select from ① to ⑤ buttons, and click it.
   ① Switching to the Single PC mode : Your image is displayed on full screen.
   ②-⑤ Switching to the Multi PC mode : Your image is displayed on a quarter screen identified in the button.

3) The projector screen is switched to the mode selected above, and the transmission of your computer image will be started to display your image on the screen.

4) The icon on the main menu is replaced by the icon you selected.

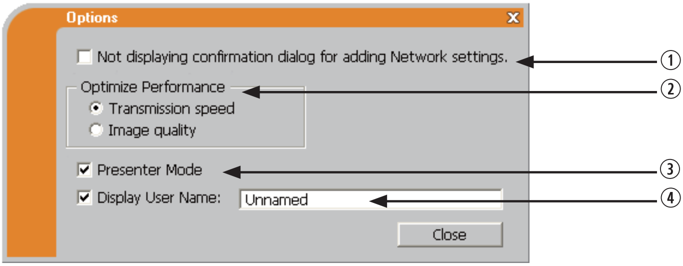
NOTE • The image transmission will be stopped, when you click the Single mode button while the projector is in the Single PC mode or you click one of the Multi mode buttons that shows the quarter screen which is currently displaying your computer images in the Multi PC mode.
• If the Multi PC mode is selected, the projector screen is automatically divided to 4 zones.
• If the Presenter mode is set on in the computer whose image is currently on screen in the Single PC mode, the button cannot be clicked on other computers.
• If you select the button of the quarter screen displaying images from another computer, the image transmission from that computer will be stopped.

The display mode can be set also by using the MULTI PC MODE in the PRESENTATION item in the NETWORK menu. The last setting made will take effect regardless of the setting method.
(Refer to ***NETWORK menu in the User's Manual – Operating Guide*** for the function on the projector.)

2.1 Using the “LiveViewer” (continued)

2.1.4 Option menu

Clicking the Option button displays the option menu on screen.



Options

☐ Not displaying confirmation dialog for adding Network settings.

Optimize Performance
● Transmission speed
○ Image quality

☑ Presenter Mode

☑ Display User Name: Unnamed

① **“Not displaying confirmation dialog for adding Network settings”**
This setting allows you to choose to display or not the confirmation dialog for adding a Network configuration (📖*19, 28*) when you connect your computer to the projector. It is turned off by default.

② **Optimize Performance**
The “LiveViewer” captures computer screen in JPEG data and sends the JPEG data to the projector. The “LiveViewer” has two options that have different compression rate of JPEG data.

Transmission speed

Speed takes priority over Image quality.
It makes JPEG compression rate higher.
The screen on the projector is rewritten quicker because the transferred data is smaller, but the image quality is worse.

Image quality

Image quality takes priority over Speed.
It makes JPEG compression rate lower.
The screen on the projector is rewritten slower because the transferred data is larger, but the image quality is better.

2.1 Using the “LiveViewer” (continued)

③ **Presenter Mode**

In the Single PC mode, the projector can be occupied by one computer and can block an access from any other computer, if the Presenter mode is selected in the “LiveViewer”.

While making your presentation, you don’t need to worry that the image on screen is unexpectedly switched to an image sent by another computer.

If you want to turn it on, put a check mark in the check box.

NOTE • If the Multi PC mode is selected, the setting for the Presenter mode is invalid.

• When switching from the Multi PC mode to the Single PC mode, the Presenter mode setting of the computer is valid.

• The Presenter Mode is set valid in factory default setting.

• In addition to using the software menu on the computer on which Presenter Mode is turned on, you can cancel this function by using the projector's OSD menu QUIT PRESENTER MODE EXECUTE of the PRESENTATION item in the NETWORK menu.

④ **Display User Name**

A “User Name” that is up to 20 letters can be input by using alphanumeric characters.

The user name can be displayed on the projector screen, so you can find out whose image is currently on the screen.

(Refer to 📖***NETWORK menu in the User’s Manual – Operating Guide***)

If the check box is not marked, the information is not sent to the projector.

2.2 Starting the Network Presentation

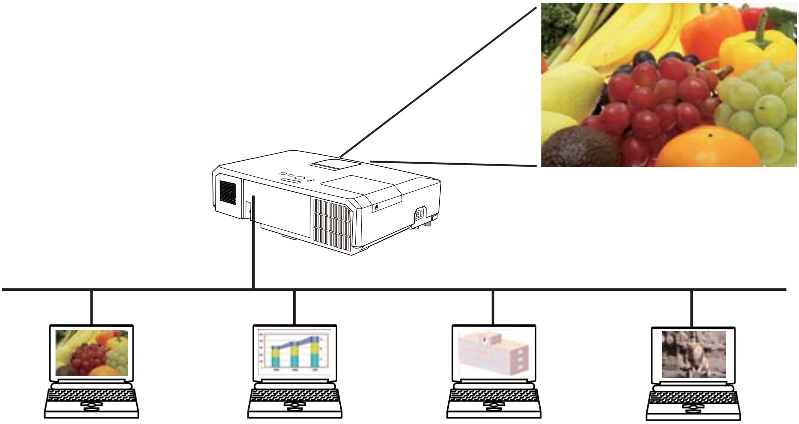
This chapter explains the Network Presentation feature with which you can project computer images transmitted through a network.
The “LiveViewer” allows you to project images from one or multiple computers by connecting the projector to an existing network without using computer cables.
This Network Presentation feature helps you to smoothly make your presentations and conduct conferences.
To start the Network Presentation, select the **LAN** port as the input source on the projector and click the Starting Capture button on the “LiveViewer”.

2.2.1 Display mode

Two display modes, Single PC mode and Multi PC mode, are available for the Network Presentation.

1) Single PC mode

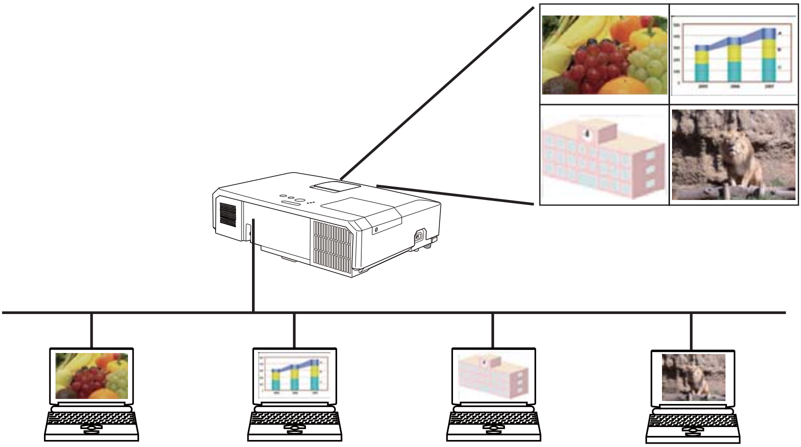
The projector displays images sent by one computer.



2.2 Starting the Network Presentation (continued)

2) Multi PC mode

The projector screen is divided to 4 zones. The projector displays images in one zone sent by a computer, so that the projector can display images sent by up to 4 computers at the same time.



2.2.2 Presenter mode

In the Single PC mode, the projector can be occupied by one computer and can block an access from any other computer, if the Presenter mode is selected in the "LiveViewer".
While making your presentation, you don't need to worry that the image on screen is unexpectedly switched to an image sent by another computer.
The Presenter mode can be set on the Option menu in the "LiveViewer" main menu. (📖*41*)

2.2.3 Display User Name

A "User Name" can be input in the "LiveViewer", which is displayed on screen by operating the menu on the projector. So, it can be found out whose image is currently displayed on screen. (📖*41*)

3. Web Control

You can adjust or control the projector via a network from a web browser on a computer that is connected to the same network.

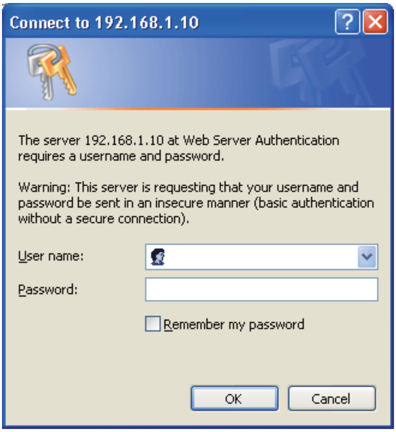
NOTE • Internet Explorer 6.0 or later is required.
• If JavaScript is disabled in your web browser configuration, you must enable JavaScript in order to use the projector web pages properly. See the Help files for your web browser for details on how to enable JavaScript.
• It is recommended that all web browser updates are installed.

3.1 Logon

To use the Web Control function, you need to logon with your user name and password. (📖*47*)
Refer to the following for configuring or controlling the projector via a web browser.

Example: If the IP address of the projector is set to **192.168.1.10**:

1) Display the logon window as shown on the right.
There are two options to display this window.
① Using the “LiveViewer”
Connect your computer and the projector via Network using the “LiveViewer”. (📖*9*) Then click the Web Control button 🌐 on the “LiveViewer” main menu (📖*37*) to start the Web browser software.



The server 192.168.1.10 at Web Server Authentication requires a username and password.

Warning: This server is requesting that your username and password be sent in an insecure manner (basic authentication without a secure connection).

User name:
Password:
☐ Remember my password

② Using Web browser software
Make sure that your computer and the projector is connected via network, and then start Web browser.
Enter the projector's IP address into URL input box of the Web browser as the example below, and then press the Enter key or ➔ button.
Example: If the IP address of the projector is set to **192.168.1.10**:
Enter “**http://192.168.1.10/**” into the address bar of the web browser and press the Enter key or click ➔ button.

2) Enter your user name and password, and then click the **[OK]**.

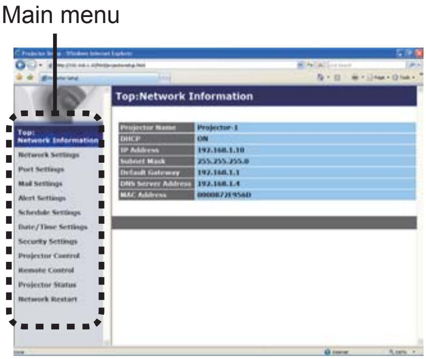
NOTE • The language used on the Web Control screen is the same as that of the OSD on the projector. If you want to change it, you need to change the OSD language on the projector. (📖***SCREEN menu in the User’s Manual – Operating Guide***)

3.1 Logon (Continued)

Below are the factory default settings for user name and password.

User name	Password
Administrator	<blank>

If you logon successfully, the screen below will be displayed.

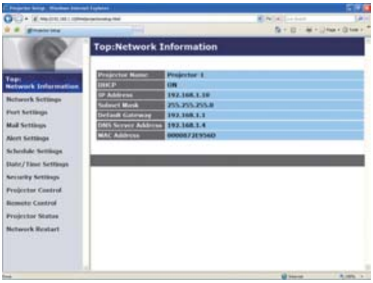

Main menu
Top:
Network Information
Network Settings
Port Settings
Mail Settings
Alert Settings
Schedule Settings
Date/Time Settings
Security Settings
Projector Control
Remote Control
Projector Status
Network Restart

Top:Network Information

Projector Name	Projector-1
DHCP	ON
IP Address	192.168.1.10
Subnet Mask	255.255.255.0
Default Gateway	192.168.1.1
DNS Server Address	192.168.1.4
MAC Address	0000872E956D

3) Click the desired operation or configuration item on the main menu.

3.2 Network Information


Top:
Network Information
Network Settings
Port Settings
Mail Settings
Alert Settings
Schedule Settings
Date/Time Settings
Security Settings
Projector Control
Remote Control
Projector Status
Network Restart

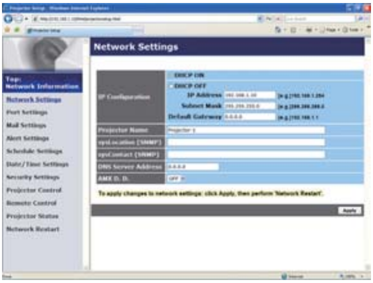
Top:Network Information

Projector Name	Projector 1
DHCP	ON
IP Address	192.168.1.10
Subnet Mask	255.255.255.0
Default Gateway	192.168.1.1
DNS Server Address	192.168.1.4
MAC Address	0000872E956D

Displays the projector's current network configuration settings.

Item	Description
Projector Name	Displays the projector name settings.
DHCP	Displays the DHCP configuration settings.
IP Address	Displays the current IP address.
Subnet Mask	Displays the subnet mask.
Default Gateway	Displays the default gateway.
DNS Server Address	Displays the DNS server address.
MAC Address	Displays the ethernet MAC address.

3.3 Network Settings


Network Settings
Top:
Network Information
Network Settings
Port Settings
Mail Settings
Alert Settings
Schedule Settings
Date/Time Settings
Security Settings
Projector Control
Remote Control
Projector Status
Network Restart
IP Configuration
DHCP ON
DHCP OFF
IP Address
Subnet Mask
Default Gateway
Projector Name
sysLocation (SNMP)
sysContact (SNMP)
DNS Server Address
AMX D. D.
Apply

To apply changes to network settings: click Apply, then perform 'Network Restart'.

Displays and configures network settings.

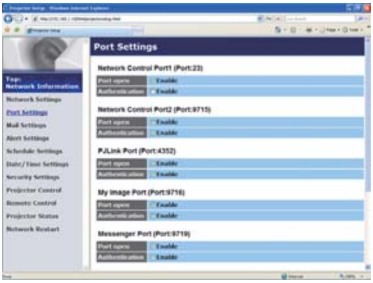
Item			Description
IP Configuration			Configures network settings.
	DHCP ON		Enables DHCP.
	DHCP OFF		Disables DHCP.
		IP Address	Configures the IP address when DHCP is disabled.
		Subnet Mask	Configures the subnet mask when DHCP is disabled.
		Default Gateway	Configures the default gateway when DHCP is disabled.
Projector Name			Configures the name of the projector. The length of the Projector Name can be up to 64 alphanumeric characters. Only alphabets, numbers and following symbols can be used. !"#$%&'()*+,-./:;<=>?@[\]^_`{|}~ and space. Particular projector name is pre-assigned by default.
sysLocation (SNMP)			Configures the location to be referred to when using SNMP. The length of the sysLocation can be up to 255 alphanumeric characters. Only numbers '0-9' and alphabet 'a-z', 'A-Z' can be used.
sysContact (SNMP)			Configures the contact information to be referred to when using SNMP. The length of the sysContact can be up to 255 alphanumeric characters. Only numbers '0-9' and alphabet 'a-z', 'A-Z' can be used.
DNS Server Address			Configures the DNS server address.
AMX D.D. (AMX Device Discovery)			Configures the AMX Device Discovery setting to detect the projector from the controllers of AMX connected to the same network. For the details of AMX Device Discovery, visit the AMX web site. URL: http://www.amx.com

Click the **[Apply]** button to save the settings.

NOTE • The new configuration settings are activated after restarting the network connection. When the configuration settings are changed, you must restart the network connection. You can restart the network connection by clicking the **[Network Restart]** on the main menu.

• If you connect the projector to an existing network, consult a network administrator before setting server addresses.

3.4 Port Settings


Port Settings
Top:
Network Information
Network Settings
Port Settings
Mail Settings
Alert Settings
Schedule Settings
Date/Time Settings
Security Settings
Projector Control
Remote Control
Projector Status
Network Restart
Network Control Port1 (Port:23)
Network Control Port2 (Port:9715)
PJLink Port (Port:4352)
My Image Port (Port:9716)
Messenger Port (Port:9719)
Port open
Authentication
Enable

Displays and configures communication port settings.

Item		Description
Network Control Port1 (Port:23)		Configures command control port 1 (Port:23).
	Port open	Click the **[Enable]** check box to use port 23.
	Authentication	Click the **[Enable]** check box when authentication is required for this port.
Network Control Port2 (Port:9715)		Configures command control port 2 (Port:9715).
	Port open	Click the **[Enable]** check box to use port 9715.
	Authentication	Click the **[Enable]** check box when authentication is required for this port.
PJLink ™ Port (Port:4352)		Configures the PJLink ™ port (Port:4352).
	Port open	Click the **[Enable]** check box to use port 4352.
	Authentication	Click the **[Enable]** check box when authentication is required for this port.
My Image Port (Port:9716)		Configures the My Image Port (Port:9716).
	Port open	Click the **[Enable]** check box to use port 9716.
	Authentication	Click the **[Enable]** check box when authentication is required for this port.
Messenger Port (Port:9719)		Configures the Messenger Port (Port:9719).
	Port open	Click the **[Enable]** check box to use port 9719.
	Authentication	Click the **[Enable]** check box when authentication is required for this port.

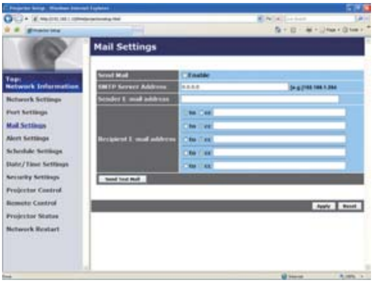
3.4 Port Settings (Continued)

Item		Description
SNMP Port		Configures the SNMP port.
	Port open	Click the **[Enable]** check box to use SNMP.
	Trap address	Configures the destination of the SNMP Trap in IP format. • The address allows not only IP address but also domain name if the valid DNS server is setup in the **Network Settings**. The maximum length of host or domain name is up to 255 characters.
	Download MIB file	Downloads a MIB file from the projector.
Network Bridge Port		Configures the Bridge port number.
	Port Number	Input the port number. Except for 9715, 9716, 9719, 9720, 5900, 5500, 4352 between 1024 and 65535 can be set up. It is set to 9717 as the default setting.

Click the **[Apply]** button to save the settings.

NOTE • The new configuration settings are activated after restarting the network connection. When the configuration settings are changed, you must restart the network connection. You can restart the network connection by clicking the **[Network Restart]** on the main menu.

3.5 Mail Settings


Mail Settings
Top:
Network Information
Network Settings
Port Settings
Mail Settings
Alert Settings
Schedule Settings
Date/Time Settings
Security Settings
Projector Control
Remote Control
Projector Status
Network Restart
Send Mail
Enable
SMTP Server Address
Sender E-mail address
Recipient E-mail address
to
cc
Send Test Mail
Apply
Reset

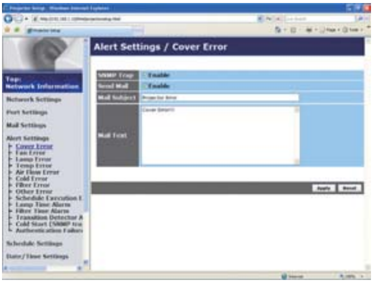
Displays and configures e-mail addressing settings.

Item	Description
Send Mail	Click the **[Enable]** check box to use the e-mail function. Configure the conditions for sending e-mail under the **Alert Settings**.
SMTP Server Address	Configures the address of the mail server in IP format. • The address allows not only IP address but also domain name if the valid DNS server is setup in the **Network Settings**. The maximum length of host or domain name is up to 255 characters.
Sender E-mail address	Configures the sender e-mail address. The length of the sender e-mail address can be up to 255 alphanumeric characters.
Recipient E-mail address	Configures the e-mail address of up to five recipients. You can also specify the **[TO]** or **[CC]** for each address. The length of the recipient e-mail address can be up to 255 alphanumeric characters.

Click the **[Apply]** button to save the settings.

NOTE • You can confirm whether the mail settings work correctly using the **[Send Test Mail]** button. Please enable Send mail setting before clicking the **[Send Test Mail]**.
• If you connect the projector to an existing network, consult a network administrator before setting server addresses.

3.6 Alert Settings


Alert Settings / Cover Error
SNMP Trap
Enable
Send Mail
Enable
Mail Subject
Mail Text
Apply
Reset
Top:
Network Information
Network Settings
Port Settings
Mail Settings
Alert Settings
Cover Error
Fan Error
Lamp Error
Temp Error
Air Flow Error
Cold Error
Filter Error
Other Error
Schedule Execution E
Lamp Time Alarm
Filter Time Alarm
Transition Detector A
Cold Start (SNMP tra
Authentication Failure
Schedule Settings
Date/Time Settings

Displays and configures failure & alert settings.

Item	Description
Cover Error	The lamp cover has not been properly fixed.
Fan Error	The cooling fan is not operating.
Lamp Error	The lamp does not light, and there is a possibility that interior portion has become heated.
Temp Error	There is a possibility that the interior portion has become heated.
Air Flow Error	The internal temperature is rising.
Cold Error	There is a possibility that the interior portion has become overcooled.
Filter Error	Filter time over.
Other Error	Other error. If displaying this error, please contact your dealer.
Schedule Execution Error	Schedule Execution error. (📖***55***)
Lamp Time Alarm	Lamp time over Alarm Time setting.
Filter Time Alarm	Filter time over Alarm Time setting.
Transition Detector Alarm	Transition Detector Alarm. (📖***OPTION menu in the User's Manual – Operating Guide***)
Cold Start	When the projector is supplied with the power, it works as below. • If the STANDBY MODE is set to the NORMAL:the projector's power status changes from “OFF” to “Standby state”. • If the STANDBY MODE is set to the SAVING:the projector's power status changes from “Standby state” to “ON (lamp is turned on)”. (📖***SETUP menu in the User's Manual – Operating Guide***)
Authentication Failure	The SNMP access is detected from the invalid SNMP community.

Refer to 📖***“Troubleshooting” in the User's Manual – Operating Guide*** for further detailed explanation of Error except Other Error and Schedule Execution Error.

3.6 Alert Settings (Continued)

The Alert Items are shown below.

Item	Description
Alarm Time	Configures the time to alert. (Only **Lamp Time Alarm** and **Filter Time Alarm**.)
SNMP Trap	Click the **[Enable]** check box to enable SNMP Trap alerts.
Send Mail	Click the **[Enable]** check box to enable e-mail alerts. (Except **Cold Start** and **Authentication Failure**.)
Mail Subject	Configures the subject line of the e-mail to be sent. The length of the subject line can be up to 100 alphanumeric characters. (Except **Cold Start** and **Authentication Failure**.)
Mail Text	Configures the text of the e-mail to be sent. The length of the text can be up to 1024 alphanumeric characters, but if you are using some of special characters below the length may be shorter. Special characters " ' : & , % \ and space (Except **Cold Start** and **Authentication Failure**.)

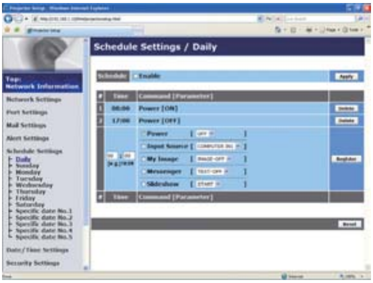
Click the **[Apply]** button to save the settings.

NOTE • The trigger of **Filter Error** e-mail is depending on the FILTER MESSAGE setting in the SERVICE item of the OPTION menu which defines the period until the filter message is displayed on the projector screen. An e-mail will be sent when the usage time of the filter exceeds the time limit that is set. No notification e-mail will be sent if the FILTER MESSAGE is set to TURN OFF. (📖***OPTION menu in the User's Manual – Operating Guide***)

• **Lamp Time Alarm** is defined as a threshold for e-mail notification (reminder) of the lamp timer. When the lamp hour exceeds this threshold that is configured through the Web page, the e-mail will be sent out.

• **Filter Time Alarm** is defined as a threshold for e-mail notification (reminder) of the filter time. When the filter hour exceeds this threshold that is configured in the Web page, the e-mail will be sent out.

3.7 Schedule Settings


Schedule Settings / Daily
Schedule
Enable
Apply
Delete
Delete
Power
Input Source
My Image
Messenger
Slideshow
Register
Reset
Top:
Network Information
Network Settings
Port Settings
Mail Settings
Alert Settings
Schedule Settings
Daily
Sunday
Monday
Tuesday
Wednesday
Thursday
Friday
Saturday
Specific date No.1
Specific date No.2
Specific date No.3
Specific date No.4
Specific date No.5
Date/Time Settings
Security Settings

#	Time	Command [Parameter]
1	08:00	Power [ON]
2	17:00	Power [OFF]

Displays and configures schedule settings.

Item	Description
Daily	Configures the daily schedule.
Sunday	Configures the Sunday schedule.
Monday	Configures the Monday schedule.
Tuesday	Configures the Tuesday schedule.
Wednesday	Configures the Wednesday schedule.
Thursday	Configures the Thursday schedule.
Friday	Configures the Friday schedule.
Saturday	Configures the Saturday schedule.
Specific date No.1	Configures the specific date (No.1) schedule.
Specific date No.2	Configures the specific date (No.2) schedule.
Specific date No.3	Configures the specific date (No.3) schedule.
Specific date No.4	Configures the specific date (No.4) schedule.
Specific date No.5	Configures the specific date (No.5) schedule.

3.7 Schedule Settings (Continued)

The schedule settings are shown below.

Item	Description
Schedule	Click the **[Enable]** check box to enable the schedule.
Date (Month/Day)	Configures the month and date. This item appears only when Specific date (No. 1-5) is selected.

Click the **[Apply]** button to save the settings.

The current event settings are displayed on the schedule list. To add additional functions and events, set the following items.

Item		Description
Time		Configures the time to execute commands.
Command [Parameter]		Configures the commands to be executed.
	Power	Configures the parameters for power control.
	Input Source	Configures the parameters for input switching.
	My Image	Configures the parameters for My Image data display. (📖***70***)
	Messenger	Configures the parameters for Messenger data display. (📖***72***)
	Slideshow	Configures the Start/Stop parameters for the Slideshow.

Click the **[Register]** button to add new commands to the schedule list.

Click the **[Delete]** button to delete commands from the schedule list.

Click the **[Reset]** button to delete all commands and reset the schedule settings from the schedule list.

3.7 Schedule Settings (Continued)

NOTE • After the projector is moved, check the date and time set for the projector before configuring the schedules. Strong shock may make the date and time settings (📖*58*) get out of tune.

• Events "**My Image**" and "**Messenger**" will not be executed appropriately but result in "schedule execution error" status in case lamp does not light or/and display data are not stored in the projector at the scheduled event execution time.

• Events "**Input Source**" and "**My Image**" will not be executed if security feature is enabled and the projector is locked due to the feature.

• Certain error state in the projector (such as temperature error, lamp error) will prevent the projector from appropriate execution of scheduled functions/events.

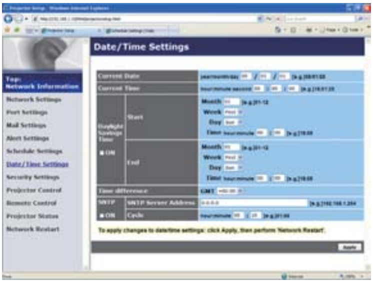
• If no USB memory device is inserted to the projector or no image data for display exists at the scheduled event time, a schedule execution error occurs against the scheduled Slideshow event.

• When you start the Slideshow, input source will be automatically switched to the **USB TYPE A** port.

• Image files stored in the root directory of the USB memory device will be displayed for the scheduled Slideshow.

• Please refer to 📖***"Troubleshooting" in the User's Manual – Operating Guide*** in case scheduled functions/events are not executed appropriately as you've set.

3.8 Date/Time Settings


Date/Time Settings
Top: Network Information
Network Settings
Port Settings
Mail Settings
Alert Settings
Schedule Settings
Date/Time Settings
Security Settings
Projector Control
Remote Control
Projector Status
Network Restart
Current Date
Current Time
Daylight Savings Time
ON
Start
End
Month
Week
Day
Time
Time difference
GMT
SNTP
ON
SNTP Server Address
Cycle
Apply

To apply changes to date/time settings: click Apply, then perform 'Network Restart'.

Displays and configures the date and time settings.

Item				Description
Current Date				Configures the current date in **year/month/day** format.
Current Time				Configures the current time in **hour:minute:second** format.
Daylight Savings Time				Click the **[ON]** check box to enable daylight savings time and set the following items.
	Start			Configures the date and time daylight savings time begins.
		Month		Configures the month daylight savings time begins (1~12).
		Week		Configures the week of the month daylight savings time begins (First, 2, 3, 4, Last).
		Day		Configures the day of the week daylight savings time begins (Sun, Mon, Tue, Wed, Thu, Fri, Sat).
		Time	**hour**	Configures the hour daylight savings time begins (0 ~ 23).
			minute	Configures the minute daylight savings time begins (0 ~ 59).
	End			Configures the date and time daylight savings time ends.
		Month		Configures the month daylight savings time ends (1 ~ 12).
		Week		Configures the week of the month daylight savings time ends (First, 2, 3, 4, Last).
		Day		Configures the day of the week daylight savings time ends (Sun, Mon, Tue, Wed, Thu, Fri, Sat).
		Time	**hour**	Configures the hour daylight savings time ends (0 ~ 23).
			minute	Configures the minute daylight savings time ends (0 ~ 59).

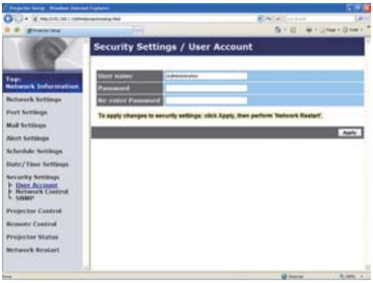
3.8 Date/Time Settings (Continued)

Item	Description
Time difference	Configures the time difference. Set the same time difference as the one set on your computer. If unsure, consult your IT manager.
SNTP	Click the **[ON]** check box to retrieve Date and Time information from the SNTP server and set the following items.
SNTP Server Address	Configures the SNTP server address in IP format. • The address allows not only IP address but also domain name if the valid DNS server is setup in the **Network Settings**. The maximum length of host or domain name is up to 255 characters.
Cycle	Configures the interval at which to retrieve Date and Time information from the SNTP server (**hour:minute**).

Click the **[Apply]** button to save the settings.

NOTE • The new configuration settings are activated after restarting the network connection. When the configuration settings are changed, you must restart the network connection. You can restart the network connection by clicking the **[Network Restart]** on the main menu.
• If you connect the projector to an existing network, consult a network administrator before setting server addresses.
• To enable the SNTP function, the time difference must be set.
• The projector will retrieve Date and Time information from the time server and override time settings when SNTP is enabled.
• The internal clock's time may not remain accurate. Using SNTP is recommended to maintain accurate time.

3.9 Security Settings



Security Settings / User Account

User name: Administrator

Password:

Re-enter Password:

To apply changes to security settings: click Apply, then perform 'Network Restart'.

Top:
Network Information
Network Settings
Port Settings
Mail Settings
Alert Settings
Schedule Settings
Date/Time Settings
Security Settings
User Account
Network Control
SNMP
Projector Control
Remote Control
Projector Status
Network Restart
Apply

Displays and configures passwords and other security settings.

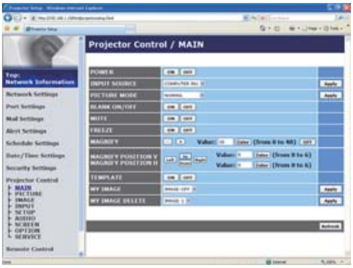
Item		Description
User Account		Configures the user name and password.
	User name	Configures the user name. The length of the text can be up to 32 alphanumeric characters.
	Password	Configures the password. The length of the text can be up to 255 alphanumeric characters.
	Re-enter Password	Reenter the above password for verification.
Network Control		Configures the Authentication password for the command control.
	Authentication Password	Configures the Authentication password. The length of the text can be up to 32 alphanumeric characters.
	Re-enter Authentication Password	Reenter the above password for verification.
SNMP		Configures the community name if SNMP is used.
	Community name	Configures the community name. The length of the text can be up to 64 alphanumeric characters.

Click the **[Apply]** button to save the settings.

NOTE • The new configuration settings are activated after restarting the network connection. When the configuration settings are changed, you must restart the network connection. You can restart the network connection by clicking the **[Network Restart]** on the main menu.

• Only numbers ‘0-9’ and alphabet ‘a-z’, ‘A-Z’ can be used.

3.10 Projector Control


Projector Control / MAIN
POWER
INPUT SOURCE
PICTURE MODE
BLANK ON/OFF
MUTE
FREEZE
MAGNIFY
MAGNIFY POSITION V
MAGNIFY POSITION H
TEMPLATE
MY IMAGE
MY IMAGE DELETE
Top:
Network Information
Network Settings
Port Settings
Mail Settings
Alert Settings
Schedule Settings
Date/Time Settings
Security Settings
Projector Control
MAIN
PICTURE
IMAGE
INPUT
SETUP
AUDIO
SCREEN
OPTION
SERVICE
Remote Control

The items shown in the table below can be performed using the Projector Control menu. Select an item with the mouse. Most of the items have a submenu. Refer to the table below for details.

NOTE • The setting value may not match with the actual value if the user changes the value manually. In that case, please refresh the page by clicking the **[Refresh]** button.

Controls the projector.

Item		Description
MAIN		
	POWER	Turns the power on/off.
	INPUT SOURCE	Selects the input source.
	PICTURE MODE	Selects the picture mode setting.
	BLANK ON/OFF	Turns Blank on/off.
	MUTE	Turns Mute on/off.
	FREEZE	Turns Freeze on/off.
	MAGNIFY	Controls the magnify setting. In some input signal sources, it might stop “Magnify” even though it does not reach to maximum setting value.
	MAGNIFY POSITION V	Adjusts the vertical magnify position.
	MAGNIFY POSITION H	Adjusts the horizontal magnify position.
	TEMPLATE	Turns template on/off.
	MY IMAGE	Selects MY IMAGE data.
	MY IMAGE DELETE	Deletes MY IMAGE data.

3.10 Projector Control (Continued)

Item		Description
PICTURE		
	BRIGHTNESS	Adjusts the brightness setting.
	CONTRAST	Adjusts the contrast setting.
	GAMMA	Selects the gamma setting.
	COLOR TEMP	Selects the color temperature setting.
	COLOR	Adjusts the color setting.
	TINT	Adjusts the tint setting.
	SHARPNESS	Adjusts the sharpness setting.
	ACTIVE IRIS	Selects the active iris setting.
	MYMEMORY SAVE	Saves the MyMemory data.
	MYMEMORY RECALL	Recalls the MyMemory data.
IMAGE		
	ASPECT	Selects the aspect setting.
	OVER SCAN	Adjusts the over scan setting.
	V POSITION	Adjusts the vertical position.
	H POSITION	Adjusts the horizontal position.
	H PHASE	Adjusts the horizontal phase.
	H SIZE	Adjusts the horizontal size.
	AUTO ADJUST EXECUTE	Performs the automatic adjustment.
INPUT		
	PROGRESSIVE	Selects the progressive setting.
	VIDEO NR	Selects the video noise reduction setting.
	COLOR SPACE	Selects the color space.
	COMPONENT	Selects the **COMPONENT** port setting.
	S-VIDEO FORMAT	Selects the s-video format setting.
	C-VIDEO FORMAT	Selects the video format setting.
	HDMI FORMAT	Selects the HDMI format setting.
	HDMI RANGE	Selects the HDMI range setting.
	COMPUTER IN1	Selects the **COMPUTER IN1** input signal type.
	COMPUTER IN2	Selects the **COMPUTER IN2** input signal type.
	FRAME LOCK - COMPUTER IN1	Turns the FRAME LOCK-COMPUTER IN1 function on/off.
	FRAME LOCK - COMPUTER IN2	Turns the FRAME LOCK-COMPUTER IN2 function on/off.
	FRAME LOCK - HDMI	Turns the FRAME LOCK-HDMI function on/off.

3.10 Projector Control (Continued)

Item		Description
SETUP		
	AUTO KEYSTONE EXECUTE	Performs the automatic keystone distortion setting.
	KEYSTONE V	Adjusts the vertical keystone distortion setting.
	KEYSTONE H	Adjusts the horizontal keystone distortion setting.
	PERFECT FIT	Adjusts the shape of the projected image in each of the corners and sides.
	AUTO ECO MODE	Turns on/off the automatic eco mode function.
	ECO MODE	Selects the eco mode.
	MIRROR	Selects the mirror status.
	STANDBY MODE	Selects the standby mode.
	MONITOR OUT - COMPUTER IN1	Assigns the **MONITOR OUT** when the **COMPUTER IN1** input port is selected.
	MONITOR OUT - COMPUTER IN2	Assigns the **MONITOR OUT** when the **COMPUTER IN2** input port is selected.
	MONITOR OUT - LAN	Assigns the **MONITOR OUT** when the **LAN** input port is selected.
	MONITOR OUT - USB TYPE A	Assigns the **MONITOR OUT** when the **USB TYPE A** input port is selected.
	MONITOR OUT - USB TYPE B	Assigns the **MONITOR OUT** when the **USB TYPE B** input port is selected.
	MONITOR OUT - HDMI	Assigns the **MONITOR OUT** when the **HDMI** input port is selected.
	MONITOR OUT - COMPONENT	Assigns the **MONITOR OUT** when the **COMPONENT** input port is selected.
	MONITOR OUT - S-VIDEO	Assigns the **MONITOR OUT** when the **S-VIDEO** input port is selected.
	MONITOR OUT - VIDEO	Assigns the **MONITOR OUT** when the **VIDEO** input port is selected.
	MONITOR OUT - STANDBY	Assigns the **MONITOR OUT** in the standby mode.

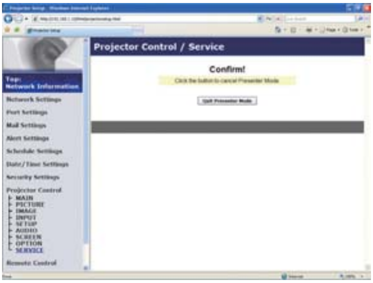
3.10 Projector Control (Continued)

Item		Description
AUDIO		
	VOLUME	Adjusts the volume setting.
	SPEAKER	Turns the built-in speaker on/off.
	AUDIO SOURCE - COMPUTER IN1	Assigns the AUDIO SOURCE - **COMPUTER IN1** input port.
	AUDIO SOURCE - COMPUTER IN2	Assigns the AUDIO SOURCE - **COMPUTER IN2** input port.
	AUDIO SOURCE - LAN	Assigns the AUDIO SOURCE - **LAN** input port.
	AUDIO SOURCE - USB TYPE A	Assigns the AUDIO SOURCE - **USB TYPE A** input port.
	AUDIO SOURCE - USB TYPE B	Assigns the AUDIO SOURCE - **USB TYPE B** input port.
	AUDIO SOURCE - HDMI	Assigns the AUDIO SOURCE - **HDMI** input port.
	AUDIO SOURCE - COMPONENT	Assigns the AUDIO SOURCE - **COMPONENT** input port.
	AUDIO SOURCE - S-VIDEO	Assigns the AUDIO SOURCE - **S-VIDEO** input port.
	AUDIO SOURCE - VIDEO	Assigns the AUDIO SOURCE - **VIDEO** input port.
	AUDIO SOURCE - STANDBY	Assigns the AUDIO SOURCE in the standby mode.
	HDMI AUDIO	Selects the HDMI audio setting.
	MIC LEVEL	Selects the microphone level.
	MIC VOLUME	Adjusts the microphone volume setting.
SCREEN		
	LANGUAGE	Selects the language for the OSD.
	MENU POSITION V	Adjusts the vertical Menu position.
	MENU POSITION H	Adjusts the horizontal Menu position.
	BLANK	Selects the Blank mode.
	START UP	Selects the start up screen mode.
	MyScreen Lock	Turns MyScreen lock function on/off.
	MESSAGE	Turns the message function on/off.
	TEMPLATE	Selects the template setting.
	C.C. - DISPLAY	Selects Closed Caption DISPLAY setting.
	C.C. - MODE	Selects Closed Caption MODE setting.
	C.C. - CHANNEL	Selects Closed Caption CHANNEL setting.

3.10 Projector Control (Continued)

Item		Description
OPTION		
	AUTO SEARCH	Turns the automatic signal search function on/off.
	AUTO KEYSTONE	Turns the automatic keystone distortion correction function on/off.
	DIRECT POWER ON	Turns the direct power on function on/off.
	AUTO POWER OFF	Configures the timer to shut off the projector when no signal is detected.
	USB TYPE B	Selects the USB TYPE B setting.
	MY BUTTON-1	Assigns the functions for the **MY BUTTON-1** button on the included remote control.
	MY BUTTON-2	Assigns the functions for the **MY BUTTON-2** button on the included remote control.
	MY SOURCE	Selects the My Source setting.
	REMOTE FREQ. - NORMAL	Turns the remote control signal frequency normal function on/off.
	REMOTE FREQ. - HIGH	Turns the remote control signal frequency high function on/off.

3.10 Projector Control (Continued)


Projector Control / Service
Top:
Network Information
Network Settings
Port Settings
Mail Settings
Alert Settings
Schedule Settings
Date/Time Settings
Security Settings
Projector Control
MAIN
PICTURE
IMAGE
INPUT
SETUP
AUDIO
SCREEN
OPTION
SERVICE
Remote Control
Quit Presenter Mode

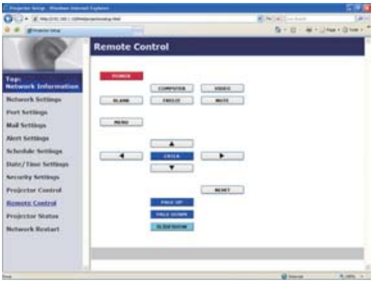
Confirm!

Click the button to cancel Presenter Mode

The items shown in the table below can be performed using the **Projector Control** menu. Click the **[QUIT PRESENTER MODE]**.

Item		Description
SERVICE		
	QUIT PRESENTER MODE	Quit compulsorily from the Presenter mode.

3.11 Remote Control


Remote Control
Top:
Network Information
Network Settings
Port Settings
Mail Settings
Alert Settings
Schedule Settings
Date/Time Settings
Security Settings
Projector Control
Remote Control
Projector Status
Network Restart

You can use your Web browser to control the projector.

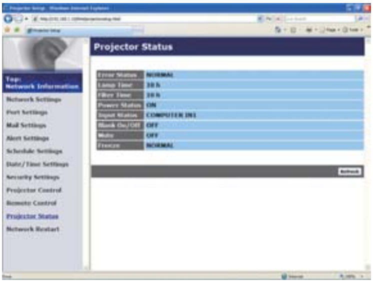
- Do not attempt to control the projector with the projector’s remote control and via your Web browser at the same time. It may cause some operational errors in the projector.

The functions on the bundled remote control are assigned to the Web Remote Control screen.

Item	Description
POWER	Assigned the same operation as **STANDBY/ON** button.
COMPUTER	Assigned the same operation as **COMPUTER** button.
VIDEO	Assigned the same operation as **VIDEO** button.
BLANK	Assigned the same operation as **BLANK** button.
FREEZE	Assigned the same operation as **FREEZE** button.
MUTE	Assigned the same operation as **MUTE** button.
MENU	Assigned the same operation as **MENU** button.
▲	Assigned the same operation as ▲ button.
▼	Assigned the same operation as ▼ button.
◄	Assigned the same operation as ◄ button.
►	Assigned the same operation as ► button.
ENTER	Assigned the same operation as **ENTER** button.
RESET	Assigned the same operation as **RESET** button.
PAGE UP	Assigned the same operation as **PAGE UP** button.
PAGE DOWN	Assigned the same operation as **PAGE DOWN** button.
SLIDESHOW	Starts the Slideshow.

NOTE • The Web Remote Control does not support repeat function that performs an action while holding a button clicked down.
• Since the repeat function is not available, click the button repeatedly as many times as you require.
• Even if you hold the button clicked down for a while, the Web Remote Control sends your request command one time only. Release the button, then click it again.
• When the **[POWER]** button is pushed, a message window comes up to confirm the operation. To control the power, push **[OK]**, otherwise push **[Cancel]**.
• The **[PAGE DOWN]** and **[PAGE UP]** buttons on the Web Remote Control cannot be used as mouse emulation function of the projector.

3.12 Projector Status

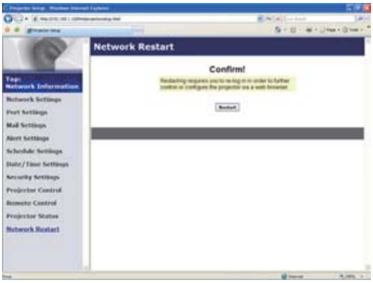

Projector Status
Top:
Network Information
Network Settings
Port Settings
Mail Settings
Alert Settings
Schedule Settings
Date/Time Settings
Security Settings
Projector Control
Remote Control
Projector Status
Network Restart
Refresh

Error Status	NORMAL
Lamp Time	10 h
Filter Time	10 h
Power Status	ON
Input Status	COMPUTER IN1
Blank On/Off	OFF
Mute	OFF
Freeze	NORMAL

Displays and configures the current projector status.

Item	Description
Error Status	Displays the current error status
Lamp Time	Displays the usage time for the current lamp.
Filter Time	Displays the usage time for the current filter.
Power Status	Displays the current power status.
Input Status	Displays the current input signal source.
Blank On/Off	Displays the current Blank on/off status.
Mute	Displays the current Mute on/off status.
Freeze	Displays the current Freeze status.

3.13 Network Restart


Network Restart
Confirm!
Restart
Top:
Network Information
Network Settings
Port Settings
Mail Settings
Alert Settings
Schedule Settings
Date/Time Settings
Security Settings
Projector Control
Remote Control
Projector Status
Network Restart

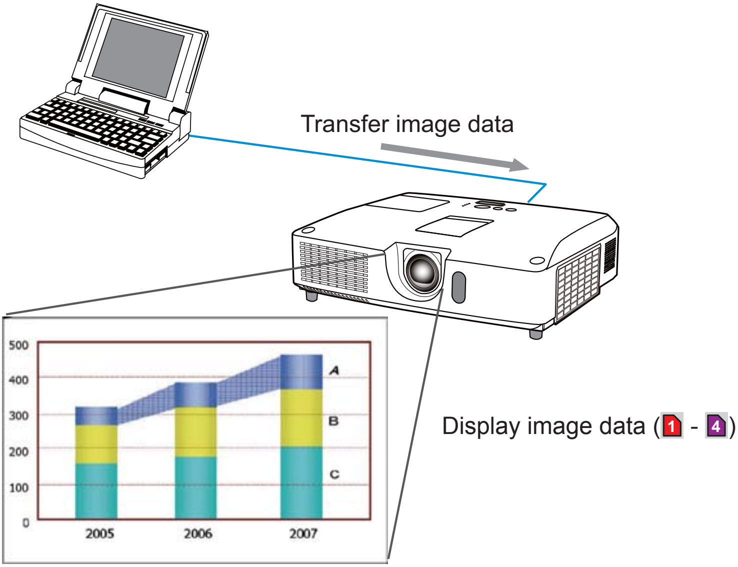
Restarts the projector’s network connection.

Item	Description
Restart	Restarts the projector’s network connection in order to activate new configuration settings.

NOTE • Restarting requires you to re-log on in order to further control or configure the projector via a web browser. Wait 30 seconds or more after clicking the **[Restart]** button to log on again.

4. My Image Function

The projector can display still images that are transferred via the network.



MY IMAGE transmission requires an exclusive application for your computer. "PJImg/Projector Image Tool" is necessary to use MY IMAGE transmission. It can be downloaded from the Hitachi web site (http://www.hitachi-america.us/digitalmedia or http://www.hitachidigitalmedia.com). Refer to the manual for the application for instructions.

To display the transferred image, select the MY IMAGE item in the NETWORK menu. For more information, please see the description of the MY IMAGE item of the NETWORK menu. (📖***NETWORK menu in User's Manual – Operating Guide***)

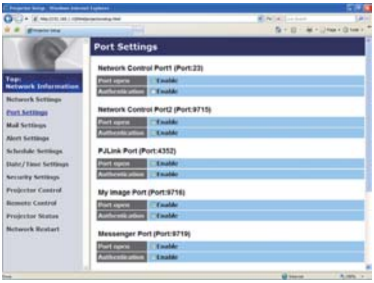
NOTE • It is possible to allocate the image file up to 4 in the maximum.
• Using **MY BUTTON** that registered MY IMAGE can display transferred image. (📖***OPTION menu in the User's Manual – Operating Guide***)
• The image file also can be displayed by using schedule function from the web browser. Refer to item **7.3 Event Scheduling** (📖*81*) in detail.
• If you display MY IMAGE data on screen while you are using the USB Display function, the application for the USB Display will be closed. To restart the application, exit the MY IMAGE function, and then the software in the projector, LiveViewerLiteUSB.exe, will run again. (📖***USB Display in the User's Manual – Operating Guide***)

4. My Image Function (Continued)

Configure the following items from a web browser when MY IMAGE function is used.

Example: If the IP address of the projector is set to **192.168.1.10:**

1) Enter **"http://192.168.1.10/"** into the address bar of the web browser.
2) Enter your user name and password, and then click the **[OK]**.
3) Click the **[Port Settings]** on the main menu.
4) Click the **[Enable]** check box to open the **My Image Port (Port: 9716)**. Click the **[Enable]** check box for the **[Authentication]** setting when authentication is required, otherwise clear the check box.
5) Click the **[Apply]** button to save the settings.


Top:
Network Information
Network Settings
Port Settings
Mail Settings
Alert Settings
Schedule Settings
Date/Time Settings
Security Settings
Projector Control
Remote Control
Projector Status
Network Restart

Port Settings

Network Control Port1 (Port:23)
Port open ☐ Enable
Authentication ☐ Enable

Network Control Port2 (Port:9715)
Port open ☐ Enable
Authentication ☐ Enable

PJLink Port (Port:4352)
Port open ☐ Enable
Authentication ☐ Enable

My Image Port (Port:9716)
Port open ☐ Enable
Authentication ☐ Enable

Messenger Port (Port:9719)
Port open ☐ Enable
Authentication ☐ Enable

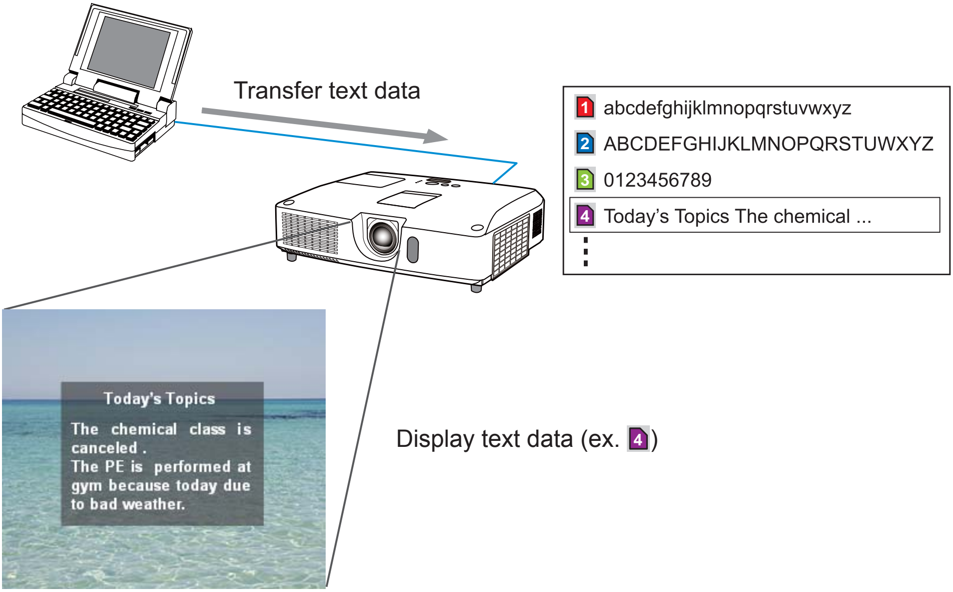
When the authentication setting is enabled, the following settings are required.

6) Click the **[Security Settings]** on the main menu.
7) Select the **[Network Control]** and enter the desired authentication password.
8) Click the **[Apply]** button to save the settings.

NOTE • The Authentication Password will be the same for **Network Control Port1 (Port: 23)**, **Network Control Port2 (Port: 9715)**, **PJLink™ Port (Port: 4352)**, **My Image Port (Port: 9716)** and **Messenger Port (Port: 9719)**.
• The new configuration settings are activated after restarting the network connection. When the configuration settings are changed, you must restart the network connection. You can restart the network connection by clicking the **[Network Restart]** on the main menu.

5. Messenger Function

The projector can display the text data transferred via the network on the screen. The text data can be displayed on the screen in two ways that displays the text transferred from the computer on real time, and the other chooses and displays the text data from the ones once stored in the projector.



1 abcdefghijklmnopqrstuvwxyz
2 ABCDEFGHIJKLMNOPQRSTUWXYZ
3 0123456789
4 Today’s Topics The chemical ...
⋮

Today's Topics
The chemical class is canceled .
The PE is performed at gym because today due to bad weather.

Messenger function requires an exclusive application for your computer. To edit, transfer and display the text data, use the application. You can download it from the Hitachi web site (http://www.hitachi-america.us/digitalmedia or http://www.hitachidigitalmedia.com). Refer to the manual for the application for the details of Messenger function and instructions of the application.

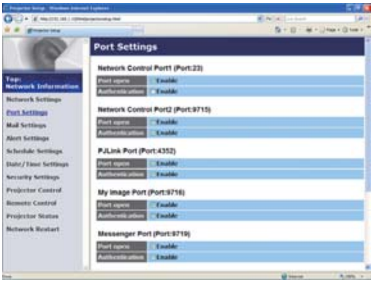
NOTE • It is possible to store the text data up to 12 in the maximum.
• Using **MY BUTTON** that registered MESSENGER can turn the displaying messenger text on/off. (📖***OPTION menu in the User’s Manual – Operating Guide***)
• The text file also can be displayed by using schedule function via the web browser. Refer to item **7.3 Event Scheduling** (📖*81*) for the detail.

5. Messenger Function (Continued)

Configure the following items from a web browser when Messenger function is used.

Example: If the IP address of the projector is set to **192.168.1.10:**

1) Enter **"http://192.168.1.10/"** into the address bar of the web browser.
2) Enter your user name and password, and then click the **[OK]**.
3) Click the **[Port Settings]** on the main menu.
4) Click the **[Enable]** check box to open the **Messenger Port (Port: 9719)**. Click the **[Enable]** check box for the **[Authentication]** setting when authentication is required, otherwise clear the check box.
5) Click the **[Apply]** button to save the settings.


Top:
Network Information
Network Settings
Port Settings
Mail Settings
Alert Settings
Schedule Settings
Date/Time Settings
Security Settings
Projector Control
Remote Control
Projector Status
Network Restart

Port Settings

Network Control Port1 (Port:23)
Port open ☐ Enable
Authentication ☐ Enable

Network Control Port2 (Port:9715)
Port open ☐ Enable
Authentication ☐ Enable

PJLink Port (Port:4352)
Port open ☐ Enable
Authentication ☐ Enable

My Image Port (Port:9716)
Port open ☐ Enable
Authentication ☐ Enable

Messenger Port (Port:9719)
Port open ☐ Enable
Authentication ☐ Enable

When the authentication setting is enabled, the following settings are required.

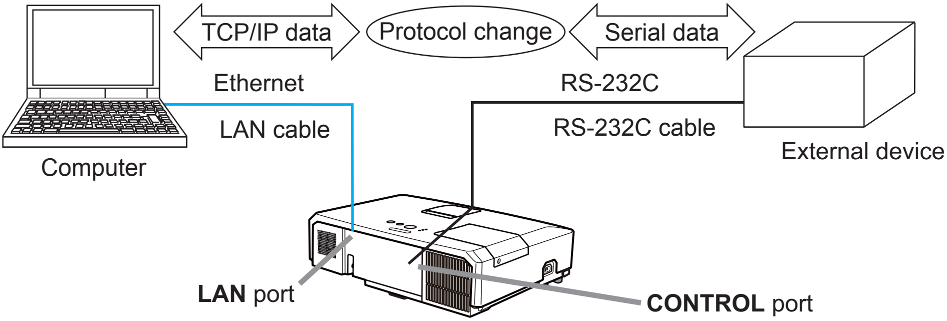
6) Click the **[Security Settings]** on the main menu.
7) Select the **[Network Control]** and enter the desired authentication password.
8) Click the **[Apply]** button to save the settings.

NOTE • The Authentication Password will be the same for **Network Control Port1 (Port: 23)**, **Network Control Port2 (Port: 9715)**, **PJLink™ Port (Port: 4352)**, **My Image Port (Port: 9716)** and **Messenger Port (Port: 9719)**.

• The new configuration settings are activated after restarting the network connection. When the configuration settings are changed, you must restart the network connection. You can restart the network connection by clicking the **[Network Restart]** on the main menu.

6. Network Bridge Function

This projector is equipped with the NETWORK BRIDGE function to perform mutual conversion of a network protocol and a serial interface.
Using the NETWORK BRIDGE function, a computer that is connected with this projector by Ethernet communication can control an external device that is connected with this projector by RS-232C communication as a network terminal.


TCP/IP data
Protocol change
Serial data
Ethernet
RS-232C
LAN cable
RS-232C cable
Computer
External device
LAN port
CONTROL port

6.1 Connecting devices

1) Connect the projector's **LAN** port and the computer's LAN port with a LAN cable, for Ethernet communication.
2) Connect the projector's **CONTROL** port and the device's RS-232C port with an RS-232C cable, for RS-232C communication.

NOTE • Before connecting the devices, read the manuals for the devices to ensure the connection.
For RS-232C connection, check the specifications of each port and use the suitable cable. (📖***"Connection to the ports" in the User's Manual – Operating Guide (Technical)***)

6.2 Communication setup

To configure the setup of the communication using NETWORK BRIDGE for the projector, use items in the COMMUNICATION menu. Open the menu of the projector and select the OPTION - SERVICE - COMMUNICATION menu. (📖***OPTION menu – SERVICE – COMMUNICATION in the User’s Manual – Operating Guide***)

1) Using the COMMUNICATION TYPE menu, select the NETWORK BRIDGE for the **CONTROL** port.
2) Using the SERIAL SETTINGS menu, select the proper baud rate and parity for the **CONTROL** port, according to the specification of the RS-232C port of the connected device.

Item	Condition
BAUD RATE	4800bps/9600bps/19200bps/38400bps
PARITY	NONE/ODD/EVEN
Data length	8 bit (fixed)
Start bit	1 bit (fixed)
Stop bit	1 bit (fixed)

3) Using the TRANSMISSION METHOD menu, set up the proper method for the **CONTROL** port according to your use.

NOTE • The OFF is selected for the COMMUNICATION TYPE as the default setting.
• Using the COMMUNICATION menu, set up the communication. Remember that an unsuitable setup could cause malfunction of communication.
• When COMMUNICATION TYPE is set to NETWORK BRIDGE, the **CONTROL** port doesn't accept RS-232C commands.

6.3 Communication port

For the NETWORK BRIDGE function, send the data from the computer to the projector with using the **Network Bridge Port** that is configured in the “Port Settings” of web browser. (📖***50***)

NOTE • Except for 9715, 9716, 9719, 9720, 5900, 5500, 4352 between 1024 and 65535 can be set up as the **Network Bridge Port** number. It is set to 9717 as the default setting.

6.4 Transmission method

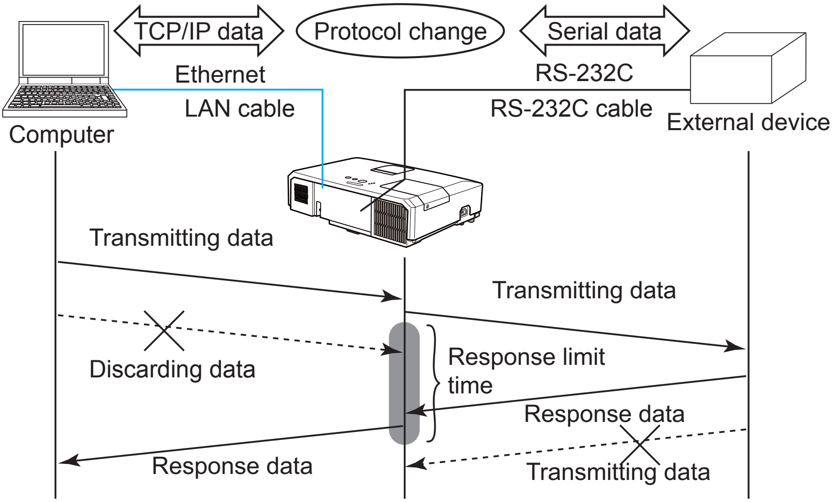
The transmission method can be selected from the menus, only when the NETWORK BRIDGE is selected for the COMMUNICATION TYPE. (📖***OPTION menu – SERVICE – COMMUNICATION in the User's Manual – Operating Guide***)

HALF-DUPLEX ↔ FULL-DUPLEX

6.4.1 HALF-DUPLEX

This method lets the projector make two way communication, but only one direction, either transmitting or receiving data, is allowed at a time.
The method does not allow the projector to receive the data from the computer while waiting for response data from an external device. After the projector receives the response data from an external device or the response limit time is past, the projector can receive the data from the computer.
That means that the projector controls transmitting and receiving the data to synchronize the communication.

To use the HALF-DUPLEX method, set up the RESPONSE LIMIT TIME following the instructions below.


TCP/IP data
Protocol change
Serial data
Ethernet
LAN cable
RS-232C
RS-232C cable
Computer
External device
Transmitting data
Transmitting data
Discarding data
Response limit time
Response data
Response data
Transmitting data

Using the RESPONSE LIMIT TIME menu, set the waiting time for response data from an external device. (📖***OPTION menu – SERVICE – COMMUNICATION in the User's Manual – Operating Guide***)

OFF ↔ 1s ↔ 2s ↔ 3s (↔ OFF)

6.4 Transmission method (Continued)

NOTE • With using the HALF-DUPLEX method, the projector can send out 254 byte data as maximum at once.
• If it is not required to monitor the response data from an external device and the RESPONSE LIMIT TIME is set to OFF, the projector can receive the data from the computer and send it out to an external device continuously.
The OFF is selected as the default setting.

6.4.2 FULL-DUPLEX

This method lets the projector make two way communication, transmitting and receiving data at the same time, without monitoring response data from an external device.
With using this method, the computer and an external device will send the data out of synchronization. If it is required to synchronize them, set the computer to make the synchronization.

NOTE • In case that the computer controls to synchronize transmitting and receiving the data, it may not be able to control an external device well depending on the processing status of the projector.

7. Other Functions

7.1 E-mail Alerts

The projector can automatically send an alert message to the specified e-mail addresses when the projector detects a certain condition that is requiring maintenance or detected an error.

NOTE • Up to five e-mail addresses can be specified.
• The projector may be not able to send e-mail if the projector suddenly loses power.

Mail Settings (📖*52*)

To use the projector's e-mail alert function, please configure the following items through a web browser.

Example: If the IP address of the projector is set to **192.168.1.10:**

1) Enter **"http://192.168.1.10/"** into the address bar of the web browser.
2) Enter your user name and password, and then click the **[OK]**.
3) Click the **[Mail Settings]** and configure each item. Refer to item **3.5 Mail Settings** (📖*52*) for further information.
4) Click the **[Apply]** button to save the settings.

NOTE • Click the **[Send Test Mail]** button in the **[Mail Settings]** to confirm that the e-mail settings are correct. The following mail will be delivered to the specified addresses.

Subject line	:Test Mail	<Projector name>
Text	:Send Test Mail	
	Date	<Testing date>
	Time	<Testing time>
	IP Address	<Projector IP address>
	MAC Address	<Projector MAC address>

7.1 E-mail Alerts (Continued)

5) Click the **[Alert Settings]** on the main menu to configure the E-mail Alerts settings.
6) Select and configure each alert item. Refer to item **3.6 Alert Setting** (📖*53*) for further information.
7) Click the **[Apply]** button to save the settings.

Failure/Warning e-mails are formatted as follows:

Subject line	: <Mail title>	<Projector name>
Text	: <Mail text>	
	Date	<Failure/Warning date>
	Time	<Failure/Warning time>
	IP Address	<Projector IP address>
	MAC Address	<Projector MAC address>

7.2 Projector Management using SNMP

The SNMP (Simple Network Management Protocol) enables to manage the projector information, which is a failure or warning status, from the computer on the network. The SNMP management software will be required on the computer to use this function.

NOTE • It is recommended that SNMP functions be carried out by a network administrator.
• SNMP management software must be installed on the computer to monitor the projector via SNMP.

SNMP Settings (📖*50*)

Configure the following items via a web browser to use SNMP.

Example: If the IP address of the projector is set to **192.168.1.10:**
1) Enter **"http://192.168.1.10/"** into the address bar of the web browser.
2) Enter your user name and password, and then click the **[OK]**.
3) Click the **[Port Settings]** on the main menu.
4) Click the **[Download MIB file]** to download a MIB file.

NOTE • To use the downloaded MIB file, specify the file by your SNMP manager.

5) Click the **[Enable]** check box to open the **SNMP Port**. Set the IP address to send the SNMP trap to when a Failure/Warning occurs.

NOTE • A Network Restart is required after the **SNMP Port** configuration settings have been changed. Click the **[Network Restart]** and configure the following items.

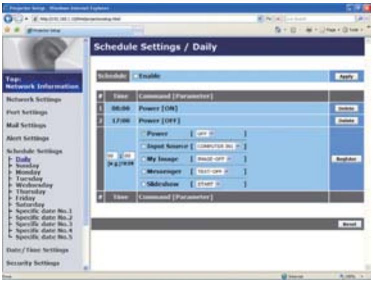
6) Click the **[Security Settings]** on the main menu.
7) Click the **[SNMP]** and set the community name on the screen that is displayed.

NOTE • A Network Restart is required after the **Community name** has been changed. Click the **[Network Restart]** and configure the following items.

8) Configure the settings for Trap transmission of Failures/Warnings. Click the **[Alert Settings]** on the main menu and select the Failure/Warning item to be configured.
9) Click the **[Enable]** check box to send out the SNMP trap for Failures/Warnings. Clear the **[Enable]** check box when SNMP trap transmission is not required.
10) Click the **[Apply]** button to save the settings.

7.3 Event Scheduling

The scheduling function enables to setup scheduled events including power on / power off. It enables to be “self-management” projector.


Schedule Settings / Daily
Top:
Network Information
Network Settings
Port Settings
Mail Settings
Alert Settings
Schedule Settings
Daily
Sunday
Monday
Tuesday
Wednesday
Thursday
Friday
Saturday
Specific date No.1
Specific date No.2
Specific date No.3
Specific date No.4
Specific date No.5
Date/Time Settings
Security Settings
Schedule
Enable
Apply
Delete
Register
Reset
Power
Input Source
My Image
Messenger
Slideshow

#	Time	Command [Parameter]
1	08:00	Power [ON]
2	17:00	Power [OFF]

NOTE • You can schedule the following control events: Power, Input Source, My Image, Messenger, Slideshow. (📖*56*)
• The power on / off event has the lowest priority among the all events that are defined at the same time.
• There are 3 types of Scheduling, 1) daily 2) weekly 3) specific date. (📖*55*)
• The priority for scheduled events is as follows 1) specific date 2) weekly 3) daily.
• Up to five specific dates are available for scheduled events. Priority is given to those with the lower numbers when more than one event has been scheduled for the same date and time (e.g., ‘Specific date No. 1’ has priority over ‘Specific date No. 2’ and so on.
• Be sure to set the date and time before enabling scheduled events. (📖*58*)

7.3 Event Scheduling(Continued)

Schedule Settings (📖55)

Schedule settings can be configured from a web browser.

Example: If the IP address of the projector is set to **192.168.1.10:**
1) Enter **"http://192.168.1.10/"** into the address bar of the web browser.
2) Enter your user name and password, and then click the **[OK]**.
3) Click the **[Schedule Settings]** on the main menu and select the required schedule item. For example, if you want to perform the command every Sunday, please select the **[Sunday]**.
4) Click the **[Enable]** check box to enable scheduling.
5) Enter the date (month/day) for specific date scheduling.
6) Click the **[Apply]** button to save the settings.
7) After configure the time, command and parameters, click the **[Register]** to add the new event.
8) Click the **[Delete]** button when you want to delete a schedule.

There are three types of scheduling.
1) Daily: Perform the specified operation at a specified time every day.
2) Sunday ~ Saturday: Perform the specified operation at the specified time on a specified day of the week.
3) Specific date: Perform the specified operation on the specified date and time.

NOTE • In standby mode, the **POWER** indicator will flash green for approx. 3 seconds when at least 1 "Power ON" schedule is saved.
• When the schedule function is used, the power cord must be connected to the projector and the outlet. The schedule function does not work when the breaker in a room is tripped. The power indicator will lights orange or green when the projector is receiving AC power.

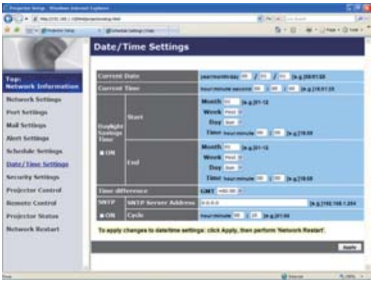
7.3 Event Scheduling(Continued)

Date/Time Settings (📖*58*)

The Date/Time setting can be adjusted via a web browser.

Example: If the IP address of the projector is set to **192.168.1.10:**

1) Enter **"http://192.168.1.10/"** into the address bar of the web browser.
2) Enter your user name and password, and then click the **[OK]**.
3) Click the **[Date/Time Settings]** on the main menu and configure each item.
   Refer to item **3.8 Date/Time Settings** (📖*58*) for further information.
4) Click the **[Apply]** button to save the settings.


Date/Time Settings
Top:
Network Information
Network Settings
Port Settings
Mail Settings
Alert Settings
Schedule Settings
Date/Time Settings
Security Settings
Projector Control
Remote Control
Projector Status
Network Restart
Current Date
Current Time
Daylight Savings Time
ON
Start
End
Month
Week
Day
Time
Time difference
GMT
SNTP
ON
SNTP Server Address
Cycle
Apply

To apply changes to date/time settings: click Apply, then perform 'Network Restart'.

> **NOTE** • The battery for the built in clock may be dead if the clock loses time even when the date and time have been set correctly. Replace the battery by following the instructions on replacing the battery.
> (📖***Replacing the internal clock battery in the User's Manual (concise)***)
> • The internal clock's time may not remain accurate. Using SNTP is recommended to maintain accurate time.

7.4 Command Control via the Network

You can configure and control the projector via the network using RS-232C commands.

Communication Port

The following two ports are assigned for the command control.

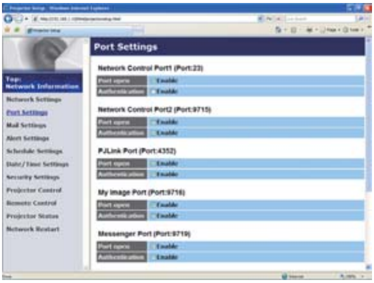
TCP #23 **(Network Control Port1 (Port: 23))**
TCP #9715 **(Network Control Port2 (Port: 9715))**

NOTE • Command control is available only via the specified port above.

Command Control Settings (📖50)

Configure the following items from a web browser when command control is used.

Example: If the IP address of the projector is set to **192.168.1.10:**
1) Enter **"http://192.168.1.10/"** into the address bar of the web browser.
2) Enter your user name and password, and then click the **[OK]**.
3) Click the **[Port Settings]** on the main menu.


Top:
Network Information
Network Settings
Port Settings
Mail Settings
Alert Settings
Schedule Settings
Date/Time Settings
Security Settings
Projector Control
Remote Control
Projector Status
Network Restart

Port Settings

Network Control Port1 (Port:23)
Port open ☐ Enable
Authentication ☐ Enable

Network Control Port2 (Port:9715)
Port open ☐ Enable
Authentication ☐ Enable

PJLink Port (Port:4352)
Port open ☐ Enable
Authentication ☐ Enable

My Image Port (Port:9716)
Port open ☐ Enable
Authentication ☐ Enable

Messenger Port (Port:9719)
Port open ☐ Enable
Authentication ☐ Enable

4) Click the **[Enable]** check box to open **Network Control Port1 (Port: 23)** to use TCP #23. Click the **[Enable]** check box for the **[Authentication]** setting when authentication is required, otherwise clear the check box.
5) Click the **[Enable]** check box to open **Network Control Port2 (Port: 9715)** to use TCP #9715. Click the **[Enable]** check box for the **[Authentication]** setting when authentication is required, otherwise clear the check box.
6) Click the **[Apply]** button to save the settings.

7.4 Command Control via the Network (Continued)

When the authentication setting is enabled, the following settings are required. (📖*60*)

7) Click the **[Security Settings]** on the main menu.
8) Click the **[Network Control]** and enter the desired authentication password.
   * See NOTE.

9) Click the **[Apply]** button to save the settings.

NOTE • The Authentication Password will be the same for **Network Control Port1 (Port: 23)**, **Network Control Port2 (Port: 9715)**, **PJLink™ Port (Port: 4352)**, **My Image Port (Port: 9716)** and **Messenger Port (Port: 9719)**.
• The new configuration settings are activated after restarting the network connection. When the configuration settings are changed, you must restart the network connection. You can restart the network connection by clicking the **[Network Restart]** on the main menu.

7.4 Command Control via the Network (Continued)

Command Format

Command formats differ among the different communication ports.

- TCP #23

  You can use the RS-232C commands without any changes. The reply data format is the same as the RS-232C commands. (📖***"RS-232C Communication" in the User's Manual – Operating Guide (Technical)***)
  However, the following reply will be sent back in the event of authentication failure when authentication is enabled.

  <Reply in the event of an authentication error>

Reply	Error code	
0x1F	0x04	0x00

- TCP #9715

  Send Data format

  The following formatting is added to the header (0 x 02), Data length (0 x 0D), Checksum (1 byte) and Connection ID (1 byte) of the RS-232C commands.

Header	Data length	RS-232Ccommand	Check Sum	Connection ID
0x02	0x0D	13 bytes	1 byte	1 byte

Header → 0x02, Fixed
Data length → RS-232C commands byte length (0x0D, Fixed)
RS-232C command → RS-232C commands that start with 0xBE 0xEF (13 bytes)
Check Sum → This is the value to make zero on the addition of the lower 8 bits from the header to the checksum.
Connection ID → Random value from 0 to 255 (This value is attached to the reply data)

7.4 Command Control via the Network (Continued)

Reply Data format

The connection ID (the data is same as the connection ID data on the sending data format) is attached to the RS-232C commands reply data.

<ACK reply>

Reply	Connection ID
0x06	1 byte

<NAK reply>

Reply	Connection ID
0x15	1 byte

<Error reply>

Reply	Error code	Connection ID
0x1C	2 bytes	1 byte

<Data reply>

Reply	Data	Connection ID
0x1D	2 bytes	1 byte

<Projector busy reply>

Reply	Status code	Connection ID
0x1F	2 bytes	1 byte

<Authentication error reply>

Reply	Authentication Error code		Connection ID
0x1F	0x04	0x00	1 byte

7.4 Command Control via the Network (Continued)

Automatic Connection Break

The TCP connection will be automatically disconnected after there is no communication for 30 seconds after being established.

Authentication

The projector does not accept commands without authentication success when authentication is enabled. The projector uses a challenge response type authentication with an MD5 (Message Digest 5) algorithm.
When the projector is using a LAN, a random 8 bytes will be returned if authentication is enabled. Bind this received 8 bytes and the Authentication Password and digest this data with the MD5 algorithm and add this in front of the commands to send.

Following is a sample if the Authentication Password is set to “password” and the random 8 bytes are “a572f60c”.

1) Select the projector.
2) Receive the random 8 bytes “a572f60c” from the projector.
3) Bind the random 8 bytes “a572f60c” and the Authentication Password “password” and it becomes “a572f60cpassword”.
4) Digest this bind “a572f60cpassword” with MD5 algorithm.
   It will be “e3d97429adffa11bce1f7275813d4bde”.
5) Add this “e3d97429adffa11bce1f7275813d4bde” in front of the commands and send the data.
   Send “e3d97429adffa11bce1f7275813d4bde”+command.
6) When the sending data is correct, the command will be performed and the reply data will be returned. Otherwise, an authentication error will be returned.

NOTE • As for the transmission of the second or subsequent commands, the authentication data can be omitted when the same connection.

8. Troubleshooting

Problem		Likely Cause	Things to Check	Reference Page Number
No image		The projector is not turned on.	Is the projector's lamp on?	*17
		The projector's input source isn't switched to LAN.	Is the projector switched to LAN?	*18, *19
Connection to the Network	The projector that you want to connect to is nowhere to be found on the list of available projectors	The computer and/or projector's network settings are not configured correctly.	Check the network configurations of the computer and projector. If you change the projector's settings, turn off the projector's AC power and then turn it on again. If you simply put the projector in STANDBY power mode and then turn it on again, the new settings might not take effect.	8
		Firewall software other than Windows® Firewall is installed in your computer.	Refer to the manual for the firewall software and take one of the following actions: - Exclude the "LiveViewer" from blocking item list - Disable the firewall while using the "LiveViewer"	–
	Can't communicate	The computer and/or projector's network settings are not configured correctly.	Check the network configurations of the computer and projector.	8
		The projector input port isn't switched to LAN.	Check the projector's input port setting.	*18, *19
		An access point is used, and your computer is connected to the access point via wireless LAN.	Use network utilities that may come with your computer or wireless LAN card to establish wireless network connection. For detail, refer to the manual of the computer or the card.	–

(continued on next page)

* User's Manual - Operating Guide

8. Troubleshooting (Continued)

	Problem	Likely Cause	Things to Check	Reference Page Number
Network Presentation	The projected image is rather slow compared to that of the computer	The projector isn't capable of relaying dynamic images such as PowerPoint® animation at full speed.	Switching the priority to 'Transmission Speed' under the options menu may help to improve speed.	41
		The compression rate being used for transferring the images is too low.	Switching the priority to 'Transmission Speed' under the options menu may help to improve speed.	41
	Can't display the movies correctly.	In some combinations of computer's video card and application software, there is a possibility that true image - especially movies played by media player - cannot be transferred to the projector with the "LiveViewer".	If there is a video acceleration level adjustment function in your application, please try to adjust it. Refer your application manual in detail.	–
	Network connection between the computer and projector is disconnected when computer display resolution is changed during Network Presentation.	The computer-Projector network connection might be disconnected when computer display resolution is changed while displaying picture.	Please re-connect using "Connect button" after changing computer display resolution, or change display resolution before connecting with the "LiveViewer".	37
	Images contain lots of interference.	The compression rate being used for transferring the images is too high.	Try setting the priority to 'Image Quality' in the "LiveViewer" Option menu. You may experience a drop in speed.	41
	Neither transparency nor translucency effects (Glass)	Using the "LiveViewer" with Windows® Aero® mode.	The "LiveViewer" does not support these features of Windows Vista® Aero®.	–

(continued on next page)

8. Troubleshooting (Continued)

Problem	Likely Cause	Things to Check	Reference Page Number
Others - Information from the projector to computer is not correct or completed - The projector does not respond - Image on screen is frozen.	Communication between the projector and computer is not working well. NETWORK Functions of the projector is not working well.	Try “RESTART” in SERVICE menu under the NETWORK menu.	*66

* User’s Manual - Operating Guide

9. Warranty and after-sales service

If a problem occurs with the equipment, please read **8. Troubleshooting** (📖*89*) section first and review all suggested check points. After that, please contact your dealer or service company, if you still have the problem. They will tell you what warranty condition is applied.

Projector

CP-X4021N/CP-X5021N/ CP-WX4021N

User's Manual (concise)

Thank you for purchasing this projector.
Please read through this manual before using this product, in order to use safely and utilize well the product.

⚠**WARNING** ►Before using this product, be sure to read all manuals for this product. After reading them, store them in a safe place for future reference.
►Heed all the warnings and cautions in the manuals or on the product.
►Follow all the instructions in the manuals or on the product.

NOTE • In this manual, unless any comments are accompanied, “the manuals” means all the documents provided with this product, and “the product” means this projector and all the accessories came with the projector.

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  Entries and graphical symbols explanation 2
  Important safety instruction 2
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  Loading batteries into the remote control 5
Arrangement 6
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📖
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Adjusting the projector's elevator 9
Displaying the picture 10
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First of all

Entries and graphical symbols explanation

The following entries and graphical symbols are used for the manuals and the product as follows, for safety purpose. Please know their meanings beforehand, and heed them.

⚠**WARNING**	This entry warns of a risk of serious personal injury or even death.
⚠**CAUTION**	This entry warns of a risk of personal injury or physical damage.
NOTICE	This entry notices of fear of causing trouble.

Important safety instruction

The followings are important instructions for safely using the product. Be sure to follow them always when handling the product. The manufacturer assumes no responsibility for any damage caused by mishandling that is beyond normal usage defined in these manuals of this projector.

⚠**WARNING** ►Never use the product in or after an abnormality (ex. giving off smoke, smelling strange, took a liquid or an object inside, broken, etc.) If an abnormality should occur, unplug the projector urgently.

►Situate the product away from children and pets.

►Do not use the product when there is fear of a thunderbolt.

►Unplug the projector from the power outlet if the projector is not used for the time being.

►Do not open or remove any portion of the product, unless the manuals direct it. For internal maintenance, leave it to your dealer or their service personnel.

►Use only the accessories specified or recommended by the manufacturer.

►Do not modify the projector or accessories.

►Do not let any things or any liquids enter to the inside of the product.

►Do not wet the product.

►Do not place the projector where any oils, such as cooking or machine oil, are used. Oil may harm the product, resulting in malfunction, or falling from the mounted position.

►Do not apply a shock or pressure to this product.

- Do not place the product on an unstable place such as the uneven surface or the leaned table.
- Do not place the product unstably. Place the projector so that it does not protrude from the surface where the projector is placed on.
- Remove all the attachments including the power cord and cables, from the projector when carrying the projector.

►Do not look into the lens and the openings on the projector, while the lamp is on.

►Do not approach the lamp cover and the exhaust vents, while the projection lamp is on. Also after the lamp goes out, do not approach them for a while, since too hot.

Regulatory notices

About Electro-Magnetic Interference

In CANADA

This Class B digital apparatus complies with Canadian ICES-003.

In the US, and other places where the FCC regulations are applicable

Declaration of Conformity

Trade name	HITACHI
Model Number	CP-X4021N, CP-X5021N, CP-WX4021N
Responsible Party	Hitachi America, Ltd.
Address	900 Hitachi way, Chula Vista, CA 91914-3556 U.S.A.
Telephone Number	+1 -800-225-1741

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules.

These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

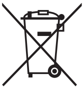
- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

INSTRUCTIONS TO USERS: This equipment complies with the requirements of FCC (Federal Communication Commission) equipment provided that the following conditions are met. Some cables have to be used with the core set. Use the accessory cable or a designated-type cable for the connection. For cables that have a core only at one end, connect the core to the projector.

CAUTION: Changes or modifications not expressly approved by the party responsible for compliance could void the user’s authority to operate the equipment.

Regulatory notices (continued)

About Waste Electrical and Electronic Equipment



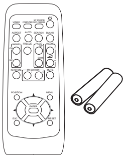
The mark is in compliance with the Waste Electrical and Electronic Equipment Directive 2002/96/EC (WEEE).
The mark indicates the requirement NOT to dispose the equipment including any spent or discarded batteries or accumulators as unsorted municipal waste, but use the return and collection systems available.
If the batteries or accumulators included with this equipment, display the chemical symbol Hg, Cd, or Pb, then it means that the battery has a heavy metal content of more than 0.0005% Mercury or more than, 0.002% Cadmium, or more than 0.004% Lead.

Contents of package

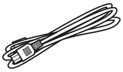
Your projector should come with the items shown below. Check that all the items are included. Require of your dealer immediately if any items are missing.

(1) Remote control with two AA batteries
(2) Power cord
(3) Computer cable
(4) Lens cover
(5) User's manuals (Book x1, CD x1)
(6) Security label
(7) Application CD

(1)



(2)



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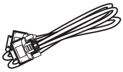

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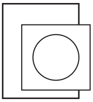

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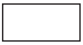
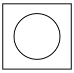


(7)

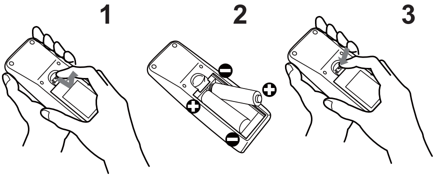


NOTE • Keep the original packing materials for future reshipment. Be sure to use the original packing materials when moving the projector. Use special caution for the lens.
• The projector may make a rattling sound when tilted, moved or shaken, since a flap to control the air flow inside of the projector has moved. Be aware that this is not a failure or malfunction.

Preparations

Loading batteries into the remote control

Please insert the batteries into the remote control before using it. If the remote control starts to malfunction, try to replace the batteries. If you will not use the remote control for long period, remove the batteries from the remote control and store them in a safe place.

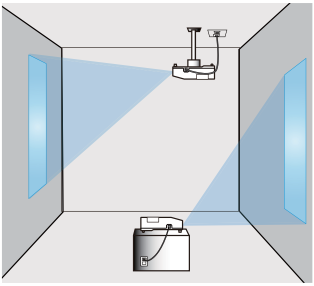


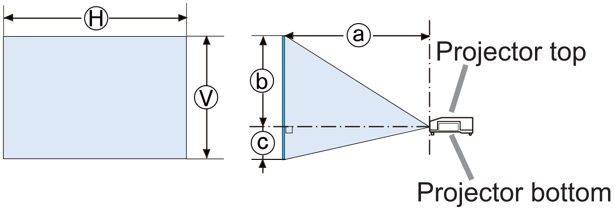
1. Holding the hook part of the battery cover, remove it.
2. Align and insert the two AA batteries (**HITACHI MAXELL, Part No.LR6 or R6P**) according to their plus and minus terminals as indicated in the remote control.
3. Replace the battery cover in the direction of the arrow and snap it back into place.

⚠**WARNING** ►Always handle the batteries with care and use them only as directed. Improper use may result in battery explosion, cracking or leakage, which could result in fire, injury and/or pollution of the surrounding environment.
- When replacing the batteries, replace both of the batteries with new batteries of the same type. Do not use a new battery with a used battery.
- Be sure to use only the batteries specified. Do not use batteries of different types at the same time. Do not mix a new battery with used one.
- Make sure the plus and minus terminals are correctly aligned when loading a battery.
- Keep a battery away from children and pets.
- Do not recharge, short circuit, solder or disassemble a battery.
- Do not place a battery in a fire or water. Keep batteries in a dark, cool and dry place.
- If you observe battery leakage, wipe out the leakage and then replace a battery. If the leakage adheres to your body or clothes, rinse well with water immediately.
- Obey the local laws on disposing the battery.

Arrangement

Refer to tables **T-1** and **T-2** at the back of this manual as well as the following to determine the screen size and projection distance.





Ⓗ× Ⓥ: Screen size
ⓐ: Projection distance (from the projector’s end)
ⓑ, ⓒ: Screen height

⚠**WARNING** ►Install the projector where you can access the power outlet easily.

►Do not subject the projector to unstable conditions. Install the projector in a stable horizontal position.

- Do not use any mounting accessories except the accessories specified by the manufacturer. Read and keep the manuals of the accessories used.
- For special installation such as ceiling mounting, be sure to consult your dealer beforehand. Specific mounting accessories and services may be required.

►Do not install the projector near thermally conductive or flammable things.

►Do not place the projector where any oils, such as cooking or machine oil, are used.

►Do not place the projector in a place where it may get wet.

⚠**CAUTION** ►Place the projector in a cool place with sufficient ventilation.

- Keep a space of 30 cm or more between a side of the projector and other objects such as walls.
- Do not stop up, block nor cover the projector's vent holes.
- Do not place the projector at places that are exposed to magnetic fields, doing so can cause the cooling fans inside the projector to malfunction.

►Avoid placing the projector in smoky, humid or dusty place.

- Do not place the projector near humidifiers. Especially for an ultrasonic humidifier, chlorine and minerals contained in tap water are atomized and could be deposited in the projector causing image degradation or other problems.

NOTICE • Position the projector to prevent light from directly hitting the projector’s remote sensor.

- Do not place the product in a place where radio interference may be caused.

Connecting with your devices

Before connecting the projector to a device, consult the manual of the device to confirm that the device is suitable for connecting with this projector and prepare the required accessories, such as a cable in accord with the signal of the device. Consult your dealer when the required accessory did not come with the product or the accessory is damaged.

After making sure that the projector and the devices are turned off, perform the connection, according to the following instructions. Refer to figures **F-1** to **F-4** at the back of this manual.
For details, see **User's Manual - Operating Guide**. Before connecting the projector to a network system, be sure to read **User's Manual - Network Guide** too.

⚠**WARNING** ►Use only the appropriate accessories. Otherwise it could cause a fire or damage the projector and devices.

- Use only the accessories specified or recommended by the projector's manufacturer. It may be regulated under some standard.
- Neither disassemble nor modify the projector and the accessories.
- Do not use the damaged accessory. Be careful not to damage the accessories. Route a cable so that it is neither stepped on nor pinched out.

⚠**CAUTION** ►For a cable with a core at only one end, connect the end with the core to the projector. That may be required by EMI regulations.

►Before connecting the projector to a network system be sure to obtain the consent of the administrator of the network.

►Do not connect the **LAN** port to any network that might have the excessive voltage.

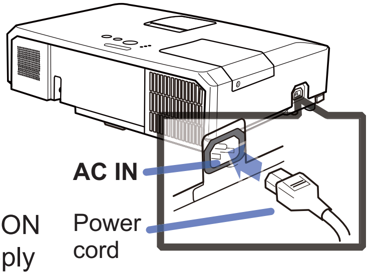
►Before removing the USB storage device from the port of the projector, be sure to use the REMOVE USB function on the thumbnail screen to secure your data.

NOTE • Do not turn on or off the projector while connected to a device in operation, unless that is directed in the manual of the device.
• Some input ports are selectable in the use. For details, see **User's Manual - Operating Guide.**
• Be careful not to mistakenly connect a connector to a wrong port.
• If an oversized USB storage device blocks the **LAN** port, use a USB extension cable to connect the USB storage device.
• If a loud feedback noise is produced from the speaker, move the microphone away from the speaker.
• This projector doesn't support plug-in power for the microphone.

Connecting power supply

1. Put the connector of the power cord into the **AC IN** (AC inlet) of the projector.
2. Firmly plug the power cord's plug into the outlet. In a couple of seconds after the power supply connection, the **POWER** indicator will light up in steady orange.

Please remember that when the DIRECT POWER ON function activated, the connection of the power supply make the projector turn on.



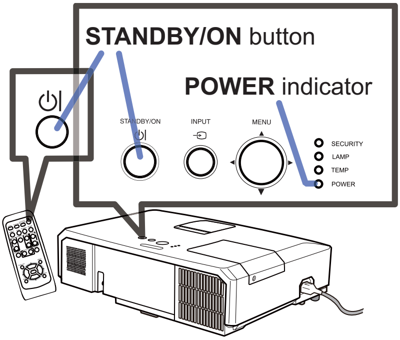
⚠**WARNING** ►Please use extra caution when connecting the power cord, as incorrect or faulty connections may result in fire and/or electrical shock.

- Only use the power cord that came with the projector. If it is damaged, consult your dealer to get a new one.
- Only plug the power cord into an outlet whose voltage is matched to the power cord. The power outlet should be close to the projector and easily accessible. Remove the power cord for complete separation.
- Never modify the power cord.

Turning on the power

1. Make sure that the power cord is firmly and correctly connected to the projector and the outlet.
2. Make sure that the **POWER** indicator is steady orange. Then remove the lens cover.
3. Press the **STANDBY/ON** button on the projector or the remote control.

The projection lamp will light up and the **POWER** indicator will begin blinking in green. When the power is completely on, the indicator will stop blinking and light in steady green.

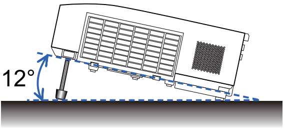


⚠**WARNING** ►A strong light is emitted when the projector's power is on. Do not look into the lens of the projector or look inside of the projector through any of the projector's openings.

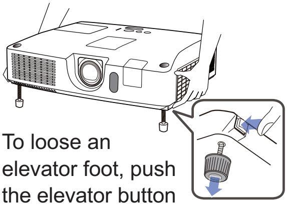
NOTE • Please power on the projector prior to the connected devices.
• The projector has the DIRECT POWER ON function, which can make the projector automatically turn on. For more information, please see **User's Manual - Operating Guide**.

Adjusting the projector's elevator

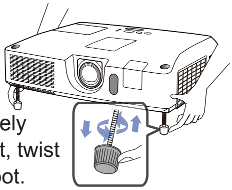
When the place to put the projector is slightly uneven to the left or right, use the elevator feet to place the projector horizontally. Using the feet can also tilt the projector in order to project at a suitable angle to the screen, elevating the front side of the projector within 12 degrees. This projector has 2 elevator feet and 2 elevator buttons. An elevator foot is adjustable while pushing the elevator button on the same side as it.



1. Holding the projector, push the elevator buttons to loose the elevator feet.
2. Position the front side of the projector to the desired height.
3. Release the elevator buttons in order to lock the elevator feet.
4. After making sure that the elevator feet are locked, put the projector down gently.
5. If necessary, the elevator feet can be manually twisted to make more precise adjustments. Hold the projector when twisting the feet.



To loose an elevator foot, push the elevator button on the same side as it.



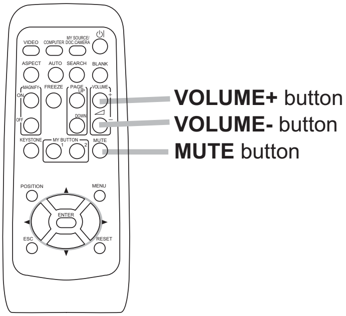
To finely adjust, twist the foot.

⚠**CAUTION** ►Do not handle the elevator buttons without holding the projector, since the projector may drop down.
►Do not tilt the projector other than elevating its front within 12 degrees using the adjuster feet. A tilt of the projector exceeding the restriction could cause malfunction or shortening the lifetime of consumables, or the projector itself.

Displaying the picture

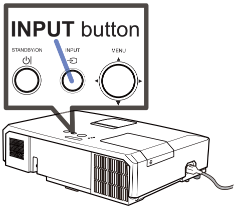
1. Activate your signal source. Turn the signal source on, and make it send the signal to the projector.

2. Use the **VOLUME + / VOLUME -** buttons to adjust the volume.
   To have the projector silent, press the **MUTE** button on the remote control.



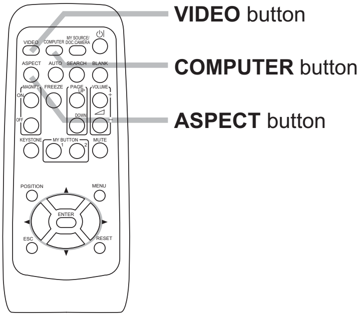
VIDEO
COMPUTER
MY SOURCE/ DOC.CAMERA
ASPECT
AUTO
SEARCH
BLANK
MAGNIFY
FREEZE
PAGE UP
VOLUME
ON
OFF
DOWN
KEYSTONE
MY BUTTON 1 2
MUTE
POSITION
MENU
ENTER
ESC
RESET
VOLUME+ button
VOLUME- button
MUTE button

3. Press the **INPUT** button on the projector. Each time you press the button, the projector switches its input port in turn.
   You can also use the remote control to select an input signal. Press the **VIDEO** button for selecting an input signal from the **HDMI, COMPONENT (Y**, **Cb/Pb**, **Cr**/**Pr)**, **S-VIDEO** or **VIDEO** port, or the **COMPUTER** button for selecting an input signal from the **COMPUTER IN1**, **COMPUTER IN2, LAN, USB TYPE A** or **USB TYPE B** port.



INPUT button
STANDBY/ON
INPUT
MENU

4. Press the **ASPECT** button on the remote control. Each time you press the button, the projector switches the mode for aspect ratio in turn.



VIDEO button
COMPUTER button
ASPECT button

5. Use the **ZOOM** ring to adjust the screen size.

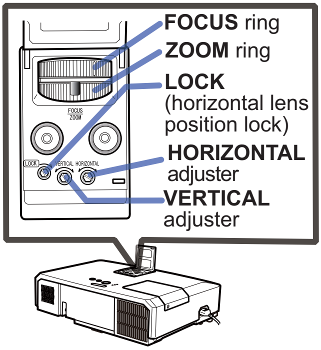
6. Use the **FOCUS** ring to focus the picture.

7. Turn the **VERTICAL** adjuster fully counter clockwise. Then turn it clockwise and adjust the vertical lens position upward.

8. Turn the **LOCK** counter clockwise to loosen the lock of the **HORIZONTAL** adjuster.

9. Turn the **HORIZONTAL** adjuster clockwise or counter clockwise to adjust the horizontal lens position.

10. Turn the **LOCK** fully clockwise to tighten it and lock the horizontal lens position.



FOCUS ring
ZOOM ring
LOCK (horizontal lens position lock)
HORIZONTAL adjuster
VERTICAL adjuster
FOCUS
ZOOM
LOCK
VERTICAL
HORIZONTAL

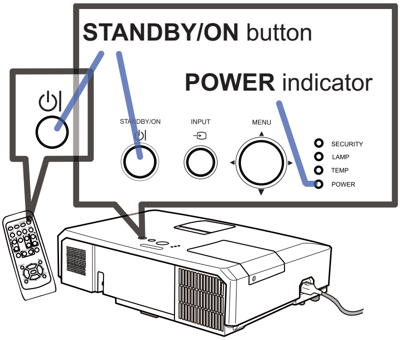
(continued on next page)

⚠**CAUTION** ►If you wish to have a blank screen while the projector's lamp is on, use one of methods below.
- Use the supplied lens cover.
- Use the BLANK function (see **User's Manual - Operating Guide**).
Taking any other action may cause the damage on the projector.

NOTE • The **ASPECT** button does not work when no proper signal is inputted.
• For the details of how to adjust the picture, please see **User's Manual - Operating Guide**.

Turning off the power

1. Press the **STANDBY/ON** button on the projector or the remote control.
   The message "Power off?" will appear on the screen for about 5 seconds.
2. Press the **STANDBY/ON** button again while the message appears.
   The projector lamp will go off, and the **POWER** indicator will begin blinking in orange. Then the **POWER** indicator will stop blinking and light in steady orange when the lamp cooling is complete.
3. Attach the lens cover, after the **POWER** indicator turns in steady orange.



Do not turn the projector on for about 10 minutes or more after turning it off. Also, do not turn the projector off shortly after turning it on. Such operations might cause the lamp to malfunction or shorten the lifetime of some parts including the lamp.

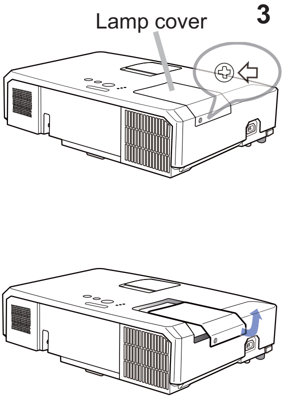
⚠**WARNING** ►Do not touch around the lamp cover and the exhaust vents during use or just after use, since it is too hot.
►Remove the power cord for complete separation. The power outlet should be close to the projector and easily accessible.

NOTE • Please power off the projector after any connected devices are powered off.
• This projector has the AUTO OFF function that can make the projector turn off automatically. For more information, please see **User's Manual - Operating Guide**.

Replacing the lamp

A lamp has finite product life. Using the lamp for long periods of time could cause the pictures darker or the color tone poor. Note that each lamp has a different lifetime, and some may burst or burn out soon after you start using them. Preparation of a new lamp and early replacement are recommended. To prepare a new lamp, make contact with your dealer and tell the lamp type number.

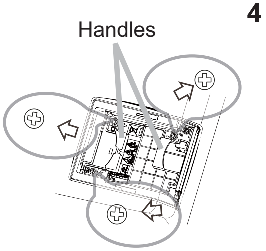
Type number : DT01171



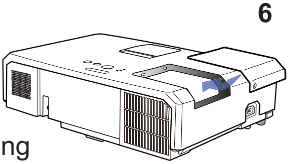
1. Turn the projector off, and unplug the power cord. Allow the projector to cool for at least 45 minutes.
2. Prepare a new lamp. If the projector is mounted on a ceiling, or if the lamp has broken, also ask the dealer to replace the lamp.

In case of replacement by yourself, follow the following procedure.

3. Loosen the screw (marked by arrow) of the lamp cover and then slide and lift the lamp cover to the side to remove it.
4. Loosen the 3 screws (marked by arrow) of the lamp, and slowly pick up the lamp by the handles. Never loosen any other screws.



5. Insert the new lamp, and retighten firmly the 3 screws of the lamp that are loosened in the previous process to lock it in place.
6. While putting the interlocking parts of the lamp cover and the projector together, slide the lamp cover back in place. Then firmly fasten the screw of the lamp cover.



7. Turn the projector on and reset the lamp time using the LAMP TIME item in the OPTION menu.

(1) Press the **MENU** button to display a menu.
(2) Point at the ADVANCED MENU in the menu using the ▼/▲ button, then press the ► button.
(3) Point at the OPTION in the left column of the menu using the ▼/▲button, then press the ► button.
(4) Point at the LAMP TIME using the ▼/▲ button, then press the ► button. A dialog will appear.
(5) Press the ► button to select “OK” on the dialog. It performs resetting the lamp time.

⚠**CAUTION** ►Do not touch any inner space of the projector, while the lamp is taken out.

NOTE • Please reset the lamp time only when you have replaced the lamp, for a suitable indication about the lamp.

Replacing the lamp (continued)

⚠ HIGH VOLTAGE ⚠ HIGH TEMPERATURE ⚠ HIGH PRESSURE

⚠**WARNING** ►The projector uses a high-pressure mercury glass lamp. The lamp can break with a loud bang, or burn out, if jolted or scratched, handled while hot, or worn over time. Note that each lamp has a different lifetime, and some may burst or burn out soon after you start using them. In addition, if the bulb bursts, it is possible for shards of glass to fly into the lamp housing, and for gas containing mercury and dust containing fine particles of glass to escape from the projector's vent holes.

►**About disposal of a lamp:** This product contains a mercury lamp; do not put it in a trash. Dispose of it in accordance with environmental laws.

- For lamp recycling, go to www.lamprecycle.org (in the US).
- For product disposal, consult your local government agency or www.eiae.org (in the US) or www.epsc.ca (in Canada).

For more information, ask your dealer.

Disconnect the plug from the power outlet

- If the lamp should break (it will make a loud bang when it does), unplug the power cord from the outlet, and make sure to request a replacement lamp from your local dealer. Note that shards of glass could damage the projector's internals, or cause injury during handling, so please do not try to clean the projector or replace the lamp yourself.
- If the lamp should break (it will make a loud bang when it does), ventilate the room well, and make sure not to inhale the gas or fine particles that come out from the projector's vent holes, and not to get them into your eyes or mouth.
- Before replacing the lamp, turn the projector off and unplug the power cord, then wait at least 45 minutes for the lamp to cool sufficiently. Handling the lamp while hot can cause burns, as well as damaging the lamp.

⊘

- Never unscrew except the appointed (marked by an arrow) screws.
- Do not open the lamp cover while the projector is suspended from a ceiling. This is dangerous, since if the lamp's bulb has broken, the shards will fall out when the cover is opened. In addition, working in high places is dangerous, so ask your local dealer to have the lamp replaced even if the bulb is not broken.
- Do not use the projector with the lamp cover removed. At the lamp replacing, make sure that the screws are screwed in firmly. Loose screws could result in damage or injury.

❗

- Use only the lamp of the specified type. Use of a lamp that does not meet the lamp specifications for this model could cause a fire, damage or shorten the life of this product.
- If the lamp breaks soon after the first time it is used, it is possible that there are electrical problems elsewhere besides the lamp. If this happens, consult your local dealer or a service representative.
- Handle with care: jolting or scratching could cause the lamp bulb to burst during use.
- Using the lamp for long periods of time, could cause it dark, not to light up or to burst. When the pictures appear dark, or when the color tone is poor, please replace the lamp as soon as possible. Do not use old (used) lamps; this is a cause of breakage.

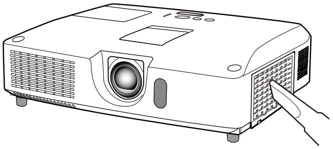
Cleaning and replacing the air filter

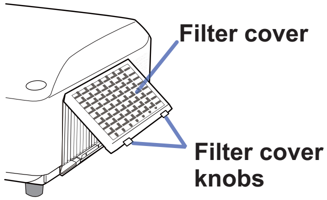
Please check and clean the air filter periodically. When the indicators or a message prompts you to clean the air filter, comply with it as soon as possible. The air filter of this projector consists of a filter cover and a filter unit with two types of filter. If one or both of the filters are damaged or heavily soiled, replace the filter unit with a new one.
Request for a filter unit with the following type number from your dealer when purchasing a new unit.

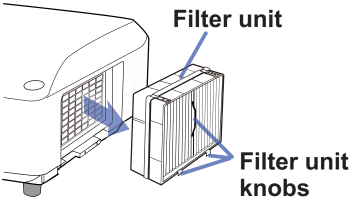
Type number : MU06641 (Filter unit)

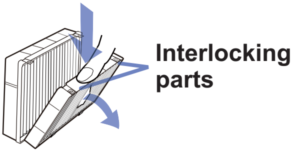
The specified filter unit also comes with a replacement lamp for this projector. Please replace the filter unit as well when you replace the lamp.

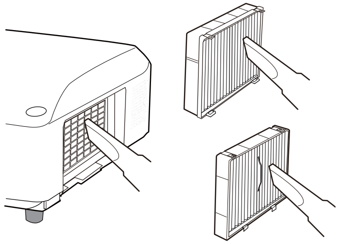
1. Turn the projector off, and unplug the power cord. Allow the projector to sufficiently cool down.
2. Use a vacuum cleaner on and around the filter cover.
3. Pick and pull up the filter cover knobs to take it off.
4. Press up slightly the bottom side knobs to unlock the bottom side of the filter unit. Pull the center knob to take the filter unit off.
5. Use a vacuum cleaner for the filter vent of the projector and the outer side of the filter unit.
6. The filter unit consists of two parts. Press down around the interlocking parts to unlock, then separate the two parts.
7. Use a vacuum cleaner for the inner side of each part of the filter unit to clean them up. If the filters are damaged or heavily soiled, replace them with the new ones.
8. Combine the two parts to reassemble the filter unit.
9. Put the filter unit back into the projector.











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Cleasning and replacing the air filter (continued)

10. Put the filter cover back into the place.

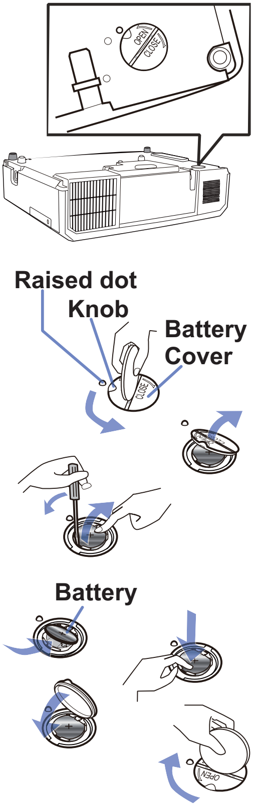
11. Turn the projector on and reset the filter time using the FILTER TIME item in the EASY MENU.
    (1) Press the **MENU** button to display a menu.
    (2) Point at the FILTER TIME using the ▲/▼ cursor buttons, then press the ► cursor (or the **ENTER** / the **RESET**) button. A dialog will appear.
    (3) Press the ► cursor button to select the “OK” on the dialog. It performs resetting the filter time.

⚠**WARNING** ► Before taking care of the air filter, make sure the power cable is not plugged in, then allow the projector to cool sufficiently.
►Use only the air filter of the specified type. Do not use the projector without the air filter or the filter cover. It could result in a fire or malfunction to the projector.
►Clean the air filter periodically. If the air filter becomes clogged by dust or the like, internal temperatures rise and could cause a fire, a burn or malfunction to the projector.

NOTE • Please reset the filter time only when you have cleaned or replaced the air filter, for a suitable indication about the air filter.
• The projector may display the message such as the “CHECK THE AIR FLOW” or turn off the projector, to prevent the internal heat level rising.

Replacing the internal clock battery

This projector has internal clock that uses a battery. When the clock of the network function does not work correctly, please try solution by replacement of the battery: **HITACHI MAXELL**, part number **CR2032** or **CR2032H**.



1. Turn the projector off, and unplug the power cord. Allow the projector to cool sufficiently.
2. After making sure that the projector has cooled adequately, slowly turn over the projector, so that the bottom is facing.
3. There is a raised dot near the battery cover at the bottom of the projector. Turn the cover in the direction indicated **OPEN** to position one end of the slit on the cover with the dot, using a coin or the like. And then pick the cover up to remove it.
4. Pry up the battery using a flathead screwdriver or the like to take it out. While prying it up, put a finger lightly on the battery since it may pop out of the holder.
5. Replace with a new battery of the specified type. With the plus side facing up, slide the battery under the claw of the spring fitting. And press down on the battery until it snaps into place.
6. Replace the battery cover in place, then turn it in the direction indicated **CLOSE** to position the knob of the cover with the dot on the bottom case to fix the cover, using a coin or the like.

NOTE • The internal clock will be initialized by removing the battery. For setting the clock, see the **User's Manual - Network Guide**.

⚠**WARNING** ►Be careful of handling a battery, as a battery can cause explosion, cracking or leakage, which could result in a fire, an injury, and environment pollution.

- Use only the specified and perfect battery. Do not use a battery with damage, such as a scratch, a dent, rust or leakage.
- When replacing the battery, replace it with a new battery.
- When a battery leaked, wipe the leakage out well with a waste cloth. If the leakage adhered to your body, immediately rinse it well with water. When a battery leaked in the battery holder, replace the batteries after wiping the leakage out.
- Make sure the plus and minus terminals are correctly aligned when loading a battery.
- Do not work on a battery; for example recharging or soldering.
- Keep a battery in a dark, cool and dry place. Never expose a battery to a fire or water.
- Keep a battery away from children and pets. Be careful for them not to swallow a battery. If swallowed consult a physician immediately for emergency treatment.
- Obey the local laws on disposing a battery.

Using the CD manual

The other manuals for this product are written into the included CD-ROM titled "User's Manual (detailed)". Before using the CD-ROM, please read the following to ensure the proper use.

■ System requirements

The system for using the CD-ROM requires the following.

Windows®:	OS:Microsoft® Windows® 98, Windows® 98SE, Windows NT®4.0, Windows® Me, Windows® 2000/Windows® XP or later CPU:Pentium® processor 133MHz / Memory:32MB or more
Macintosh®:	OS:Mac OS® 10.2 or later CPU:PowerPC® / Memory:32MB or more
CD-ROM drive:	4x CD-ROM drive
Display:	256 color / 640x480 dots resolution
Applications:	Microsoft® Internet Explorer®4.0 and Adobe® Acrobat® Reader® 4.0 or later

■ How to use the CD

1. Insert CD into computer's CD-ROM drive.

Windows®:	In a while, Web browser automatically starts. Start up window comes up.
Macintosh®:	(1) Double-click on the "Projectors" icon appeared on the desktop screen. (2) When "main.html" file is clicked, Web browser will start and Initial window will appear.

2. Click the model name of your projector first, and then click language you want from the displayed list. The User's manual (detailed) will open.

⚠**CAUTION** ►Only use the CD-ROM in a computer CD drive. The CD-ROM is designed for computer use only. NEVER INSERT THE CD-ROM INTO A NON-COMPUTER CD PLAYER! Inserting the CD-ROM into an incompatible CD drive may produce a loud noise, which in turn MAY RESULT IN EAR AND SPEAKER DAMAGE!

• After using CD-ROM, please put it into CD case and keep it. Please keep the CD neither in direct sunlight nor in a high temperature and high humidity environment.

NOTE • The information in the CD-ROM is subject to change without notice. Please check our website where you may find the latest information for this projector. (📖*19*)

• No responsibility is taken for any obstacle and defect to hardware and software of your computer as a result of the use of the CD-ROM.

• All or Any part of the information in the CD-ROM must not be copied, reproduced or republished without notice to our company.

Specifications

Item	Specification
Product name	Liquid crystal projector
Liquid Crystal Panel	**CP-X4021N, CP-X5021N:** 786,432 pixels (1024 horizontal x 768 vertical) **CP-WX4021N:** 1,024,000 pixels (1280 horizontal x 800 vertical)
Lamp	245 W UHP
Speaker	16 W mono (8 W x2)
Power supply/ Rated current	AC100-120 V: 4.0 A, AC220-240 V: 2.0 A
Power consumption	AC100-120 V: 380 W, AC220-240 V: 360 W
Temperature range	5 ~ 35 °C (Operating)
Size	401 (W) x 103 (H) x 318 (D) mm * Not including protruding parts. Refer to figure **F-5** at the back of this manual.
Weight (mass)	approx. 4.6 kg
Ports	**COMPUTER IN1** .... D-sub 15 pin mini jack x1 **COMPUTER IN2** (H, V, G/Y, B/Cb/Pb, R/Cr/Pr) ... BNC jack x5 **HDMI** .... HDMI connector x1 **MONOTOR OUT** .... D-sub 15 pin mini jack x1 **COMPONENT** (Y, Cb/Pb, Cr/Pr) .... RCA jack x3 **S-VIDEO** .... Mini DIN 4 pin jack x1 **VIDEO** .... RCA jack x1 **AUDIO IN1** .... 3.5 mm (stereo) mini jack x1 **AUDIO IN2** .... 3.5 mm (stereo) mini jack x1 **AUDIO IN3 (R, L)** .... RCA jack x2 **AUDIO OUT (R, L)** .... RCA jack x2 **USB TYPE A** .... USB type A connector x1 **USB TYPE B** .... USB type B connector x1 **CONTROL** .... D-sub 9 pin plug x1 **LAN** .... RJ45 jack x1 **MIC** .... 3.5 mm (mono) mini jack x1 **REMOTE CONTROL** .... 3.5 mm (stereo) mini jack x1
Optional parts	**Lamp:** DT01171 **Filter set:** MU06641 **Mounting accessory:** HAS-3010 (Bracket for ceiling mount) HAS-204L (Fixing adaptor for low ceilings) HAS-304H (Fixing adaptor for high ceilings) **Laser remote control:** RC-R008 * For more information, please consult your dealer.

Troubleshooting - Warranty and after-service

If an abnormal operation (such as smoke, strange odor or excessive sound) should occur, stop using the projector immediately.
Otherwise if a problem occurs with the projector, first refer to “Troubleshooting” of **User’s Manual - Operating Guide**, **Instant Stack Guide** and **Network Guide**, and run through the suggested checks.
If this does not resolve the problem, please consult your dealer or service company. They will tell you what warranty condition is applied.

Please check the following web address where you may find the latest information for this projector.

Product information and Manuals :	**http://www.hitachi-america.us/digitalmedia**
Production information :	**http://www.hitachidigitalmedia.com**
Direct link to manual download :	**http://www.hitachiserviceu.com/support/guides/userguides.htm**

NOTE • The information in this manual is subject to change without notice.
• The manufacturer assumes no responsibility for any errors that may appear in this manual.
• The reproduction, transfer or copy of all or any part of this document is not permitted without express written consent.

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- Blu-ray Disc is a trademark.

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End User License Agreement for the Projector Software

• Software in the projector consists of the plural number of independent software modules and there exist our copyright or/and third party copyrights for each of such software modules.
• Be sure to read “End User License Agreement for the Projector Software” which is separated document. (in the CD)

Projector

CP-X4021N/CP-X5021N/ CP-WX4021N

User's Manual (detailed) Operating Guide – Technical

Example of computer signal

Resolution (H x V)	H. frequency (kHz)	V. frequency (Hz)	Rating	Signal mode
720 x 400	37.9	85.0	VESA	TEXT
640 x 480	31.5	59.9	VESA	VGA (60Hz)
640 x 480	37.9	72.8	VESA	VGA (72Hz)
640 x 480	37.5	75.0	VESA	VGA (75Hz)
640 x 480	43.3	85.0	VESA	VGA (85Hz)
800 x 600	35.2	56.3	VESA	SVGA (56Hz)
800 x 600	37.9	60.3	VESA	SVGA (60Hz)
800 x 600	48.1	72.2	VESA	SVGA (72Hz)
800 x 600	46.9	75.0	VESA	SVGA (75Hz)
800 x 600	53.7	85.1	VESA	SVGA (85Hz)
832 x 624	49.7	74.5		Mac 16” mode
1024 x 768	48.4	60.0	VESA	XGA (60Hz)
1024 x 768	56.5	70.1	VESA	XGA (70Hz)
1024 x 768	60.0	75.0	VESA	XGA (75Hz)
1024 x 768	68.7	85.0	VESA	XGA (85Hz)
1152 x 864	67.5	75.0	VESA	1152 x 864 (75Hz)
1280 x 768	47.7	60.0	VESA	W-XGA (60Hz)
1280 x 800	49.7	60.0	VESA	1280 x 800 (60Hz)
1280 x 960	60.0	60.0	VESA	1280 x 960 (60Hz)
1280 x 1024	64.0	60.0	VESA	SXGA (60Hz)
1280 x 1024	80.0	75.0	VESA	SXGA (75Hz)
1280 x 1024	91.1	85.0	VESA	SXGA (85Hz)
1400 x 1050	65.2	60.0	VESA	SXGA+ (60Hz)
1600 x 1200	75.0	60.0	VESA	UXGA (60Hz)

NOTE • Be sure to check jack type, signal level, timing and resolution before connecting this projector to a PC.

• Some PCs may have multiple display screen modes. Use of some of these modes will not be possible with this projector.

• Depending on the input signal, full-size display may not be possible in some cases. Refer to the number of display pixels above.

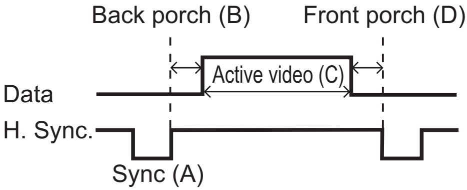
• Although the projector can display signals with resolution up to UXGA (1600x1200), the signal will be converted to the projector’s panel resolution before being displayed. The best display performance will be achieved if the resolutions of the input signal and projector panel are identical.

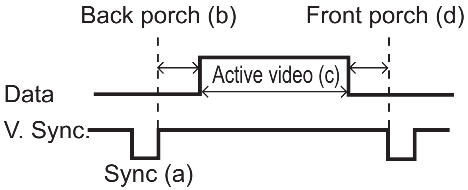
• Automatic adjustment may not function correctly with some input signals.

• The image may not be displayed correctly when the input sync signal is a composite sync or a sync on G.

Initial set signals

The following signals are used for the initial settings. The signal timing of some computer models may be different. In such case, adjust the items V POSITION and H POSITION in the IMAGE menu.

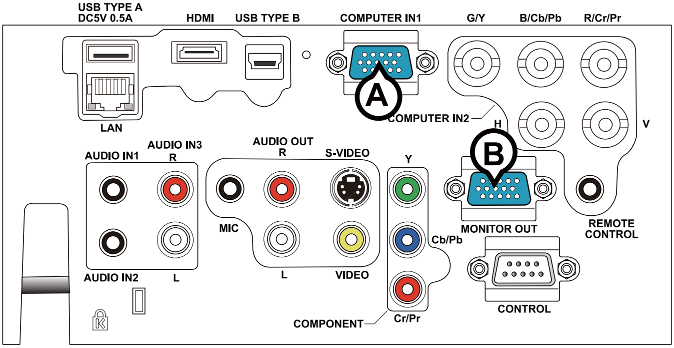




Resolution (H x V)	Horizontal signal timing (μs)				Vertical signal timing (lines)				Signal mode
	(A)	(B)	(C)	(D)	(a)	(b)	(c)	(d)	
720 x 400	2.0	3.0	20.3	1.0	3	42	400	1	TEXT
640 x 480	3.8	1.9	25.4	0.6	2	33	480	10	VGA (60Hz)
640 x 480	1.3	4.1	20.3	0.8	3	28	480	9	VGA (72Hz)
640 x 480	2.0	3.8	20.3	0.5	3	16	480	1	VGA (75Hz)
640 x 480	1.6	2.2	17.8	1.6	3	25	480	1	VGA (85Hz)
800 x 600	2.0	3.6	22.2	0.7	2	22	600	1	SVGA (56Hz)
800 x 600	3.2	2.2	20.0	1.0	4	23	600	1	SVGA (60Hz)
800 x 600	2.4	1.3	16.0	1.1	6	23	600	37	SVGA (72Hz)
800 x 600	1.6	3.2	16.2	0.3	3	21	600	1	SVGA (75Hz)
800 x 600	1.1	2.7	14.2	0.6	3	27	600	1	SVGA (85Hz)
832 x 624	1.1	3.9	14.5	0.6	3	39	624	1	Mac 16" mode
1024 x 768	2.1	2.5	15.8	0.4	6	29	768	3	XGA (60Hz)
1024 x 768	1.8	1.9	13.7	0.3	6	29	768	3	XGA (70Hz)
1024 x 768	1.2	2.2	13.0	0.2	3	28	768	1	XGA (75Hz)
1024 x 768	1.0	2.2	10.8	0.5	3	36	768	1	XGA (85Hz)
1152 x 864	1.2	2.4	10.7	0.6	3	32	864	1	1152 x 864 (75Hz)
1280 x 768	1.7	2.5	16.0	0.8	3	23	768	1	W-XGA (60Hz)
1280 x 800	1.6	2.4	15.3	0.8	3	24	800	1	1280 x 800 (60Hz)
1280 x 960	1.0	2.9	11.9	0.9	3	36	960	1	1280 x 960 (60Hz)
1280 x 1024	1.0	2.3	11.9	0.4	3	38	1024	1	SXGA (60Hz)
1280 x 1024	1.1	1.8	9.5	0.1	3	38	1024	1	SXGA (75Hz)
1280 x 1024	1.0	1.4	8.1	0.4	3	44	1024	1	SXGA (85Hz)
1400 x 1050	1.2	2.0	11.4	0.7	3	33	1050	1	SXGA+ (60Hz)
1600 x 1200	1.2	1.9	9.9	0.4	3	46	1200	1	UXGA (60Hz)

Connection to the ports

NOTICE ►Use the cables with straight plugs, not L-shaped ones, as the input ports of the projector are recessed.

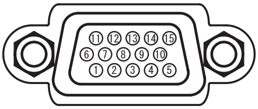

USB TYPE A
DC5V 0.5A
HDMI
USB TYPE B
COMPUTER IN1
G/Y
B/Cb/Pb
R/Cr/Pr
A
COMPUTER IN2
H
V
LAN
AUDIO IN1
AUDIO IN3
R
AUDIO OUT
R
S-VIDEO
Y
B
MIC
MONITOR OUT
REMOTE CONTROL
Cb/Pb
AUDIO IN2
L
L
VIDEO
CONTROL
COMPONENT
Cr/Pr

ⒶCOMPUTER IN1, ⒷMONITOR OUT

D-sub 15pin mini shrink jack

<Computer signal>

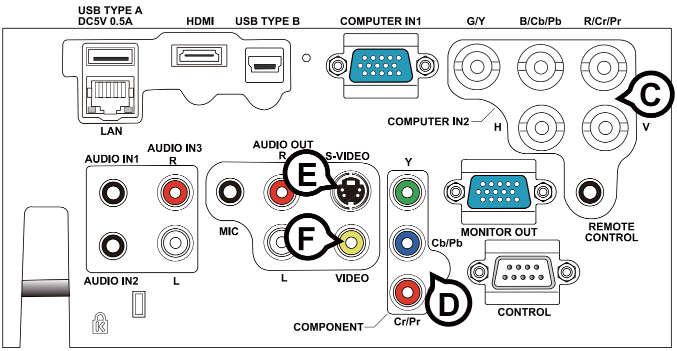
- Video signal: RGB separate, Analog, 0.7Vp-p, 75Ω terminated (positive)
- H/V. sync. signal: TTL level (positive/negative)
- Composite sync. signal: TTL level


⑪ ⑫ ⑬ ⑭ ⑮
⑥ ⑦ ⑧ ⑨ ⑩
① ② ③ ④ ⑤

<Component video signal>

- Video signal:
  -Y, Analog, 1.0±0.1Vp-p with composite sync, 75Ω terminated
  -Cb/Pb, Analog, 0.7±0.1Vp-p, 75Ω terminated
  -Cr/Pr, Analog, 0.7±0.1Vp-p 75Ω terminated
- System: 480i@60, 480p@60, 576i@50, 720p@50/60, 1080i@50/60

Pin	Signal	Pin	Signal
1	Video Red, Cr/Pr	9	(No connection)
2	Video Green, Y	10	Ground
3	Video Blue, Cb/Pb	11	(No connection)
4	(No connection)	12	Ⓐ: SDA (DDC data), (No connection) Ⓑ: (No connection)
5	Ground		
6	Ground Red, Ground Cr/Pr	13	H. sync / Composite sync., (No connection)
7	Ground Green, Ground Y	14	V. sync., (No connection)
8	Ground Blue, Ground Cb/Pb	15	Ⓐ: SCL (DDC clock), (No connection) Ⓑ: (No connection)


USB TYPE A
DC5V 0.5A
HDMI
USB TYPE B
COMPUTER IN1
G/Y
B/Cb/Pb
R/Cr/Pr
C
LAN
COMPUTER IN2
H
V
AUDIO IN1
AUDIO IN3
R
AUDIO OUT
R
E
S-VIDEO
Y
MIC
F
MONITOR OUT
Cb/Pb
REMOTE
CONTROL
AUDIO IN2
L
L
VIDEO
D
CONTROL
COMPONENT
Cr/Pr

ⒸCOMPUTER IN2 (G/Y, B/Cb/Pb, R/Cr/Pr, H, V)

- BNC jack x 5
- Video : Analog 0.7Vp-p, 75Ω terminator
- H/V, sync, : TTL level (positive/negative)
- Composite sync, : TTL level

ⒹCOMPONENT (Y, Cb/Pb, Cr/Pr)

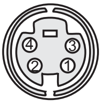
RCA jack x3

- System: 480i@60, 480p@60, 576i@50, 720p@50/60, 1080i@50/60, 1080p@50/60

Port	Signal
Y	Component video Y, 1.0±0.1Vp-p with composite sync, 75Ω terminator
Cb/Pb	Component video Cb/Pb, 0.7±0.1Vp-p, 75Ω terminator
Cr/Pr	Component video Cr/Pr, 0.7±0.1Vp-p, 75Ω terminator

ⒺS-VIDEO

Mini DIN 4pin jack



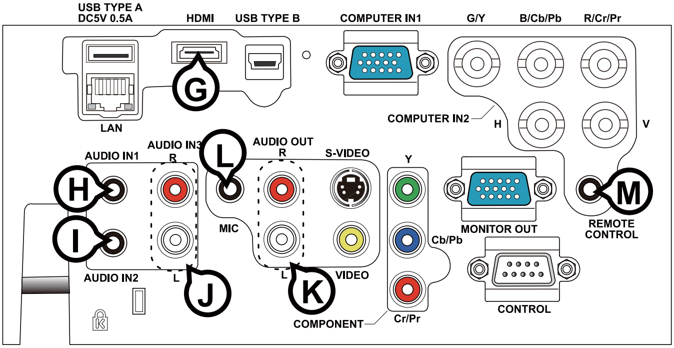
- System: NTSC, PAL, SECAM, PAL-M, PAL-N, NTSC4.43, PAL(60Hz)

Pin	Signal
1	Color signal 0.286Vp-p (NTSC, burst), 75Ω terminator Color signal 0.300Vp-p (PAL/SECAM, burst) 75Ω terminator
2	Brightness signal, 1.0Vp-p, 75Ω terminator
3	Ground
4	Ground

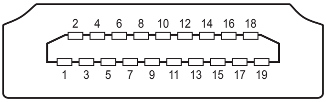
ⒻVIDEO

RCA jack

- System: NTSC, PAL, SECAM, PAL-M, PAL-N, NTSC4.43, PAL(60Hz)
- 1.0±0.1Vp-p, 75Ω terminator


USB TYPE A
DC5V 0.5A
HDMI
USB TYPE B
COMPUTER IN1
G/Y
B/Cb/Pb
R/Cr/Pr
G
LAN
COMPUTER IN2
H
V
AUDIO IN1
AUDIO IN3
R
L
AUDIO OUT
R
S-VIDEO
Y
H
M
MIC
MONITOR OUT
REMOTE
CONTROL
I
Cb/Pb
AUDIO IN2
L
L
VIDEO
J
K
CONTROL
COMPONENT
Cr/Pr

ⒼHDMI


2 4 6 8 10 12 14 16 18
1 3 5 7 9 11 13 15 17 19

- Type :Digital audio/video connector
- Audio signal : Linear PCM (Sampling rate; 32/44.1/48 kHz)

Pin	Signal	Pin	Signal	Pin	Signal
1	T.M.D.S. Data2 +	8	T.M.D.S. Data0 Shield	15	SCL
2	T.M.D.S. Data2 Shield	9	T.M.D.S. Data0 -	16	SDA
3	T.M.D.S. Data2 -	10	T.M.D.S. Clock +	17	DDC/CEC Ground
4	T.M.D.S. Data1 +	11	T.M.D.S. Clock Shield	18	+5V Power
5	T.M.D.S. Data1 Shield	12	T.M.D.S. Clock -	19	Hot Plug Detect
6	T.M.D.S. Data1 -	13	CEC		
7	T.M.D.S. Data0 +	14	Reserved(N.C. on device)		

ⒽAUDIO IN1, ⒾAUDIO IN2

Ø3.5 stereo mini jack

- 200 mVrms, 47kΩ terminator

ⒿAUDIO IN3 (R, L)

RCA jack x2

- 200 mVrms, 47kΩ terminator

ⓀAUDIO OUT (R, L)

RCA jack x2

- 200 mVrms, 1kΩ output impedance

ⓁMIC

Ø3.5 mono mini jack

<Low level>

- 2 mVrms, 1kΩ terminator

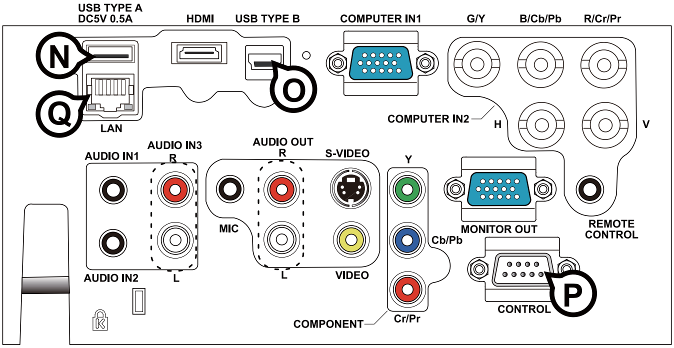
<High level>

- 20 mVrms, 1kΩ terminator

ⓂREMOTE CONTROL K IN L OUT

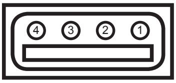
Ø3.5 stereo mini jack

- To be connected with the remote control that came with the projector.


USB TYPE A
DC5V 0.5A
HDMI
USB TYPE B
COMPUTER IN1
G/Y
B/Cb/Pb
R/Cr/Pr
N
O
Q
LAN
COMPUTER IN2
H
V
AUDIO IN1
AUDIO IN3
R
AUDIO OUT
R
S-VIDEO
Y
MIC
MONITOR OUT
REMOTE
CONTROL
Cb/Pb
AUDIO IN2
L
L
VIDEO
P
CONTROL
COMPONENT
Cr/Pr

ⓃUSB TYPE A

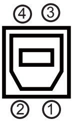
USB A type jack



Pin	Signal
1	+5V
2	- Data
3	+ Data
4	Ground

ⓄUSB TYPE B

USB B type jack

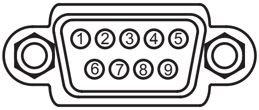


Pin	Signal
1	+5V
2	- Data
3	+ Data
4	Ground

ⓅCONTROL

D-sub 9pin plug

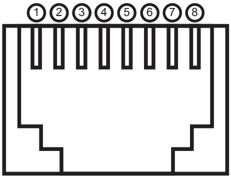
- About the details of RS-232C communication, please refer to the section "RS-232C Communication".



Pin	Signal	Pin	Signal	Pin	Signal
1	(No connection)	4	(No connection)	7	RTS
2	RD	5	Ground	8	CTS
3	TD	6	(No connection)	9	(No connection)

ⓆLAN

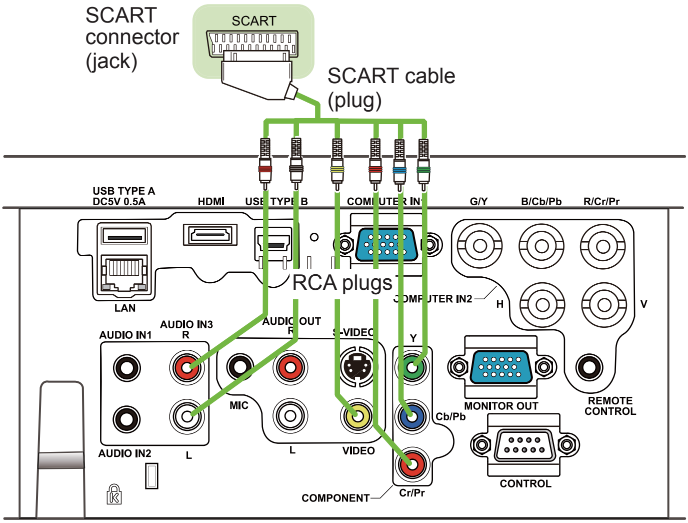
RJ-45 jack



Pin	Signal	Pin	Signal	Pin	Signal
1	TX+	4	-	7	-
2	TX-	5	-	8	-
3	RX+	6	RX-		

To input SCART RGB signal;

ex.


SCART connector (jack)
SCART
SCART cable (plug)
RCA plugs
USB TYPE A
DC5V 0.5A
HDMI
USB TYPE B
COMPUTER IN1
G/Y
B/Cb/Pb
R/Cr/Pr
LAN
COMPUTER IN2
H
V
AUDIO IN1
AUDIO IN3
R
AUDIO OUT
R
S-VIDEO
Y
MIC
Cb/Pb
MONITOR OUT
REMOTE CONTROL
AUDIO IN2
L
L
VIDEO
CONTROL
COMPONENT
Cr/Pr

To input SCART RGB signal to the projector, use a SCART to RCA cable. Connect the plugs refer to above ex.. For more reference, please consult your dealer.

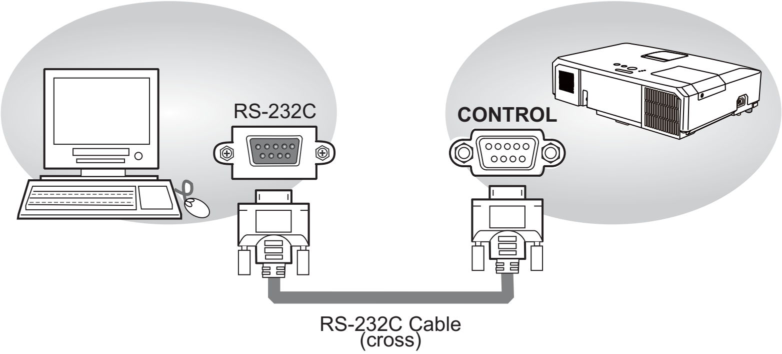
RS-232C Communication

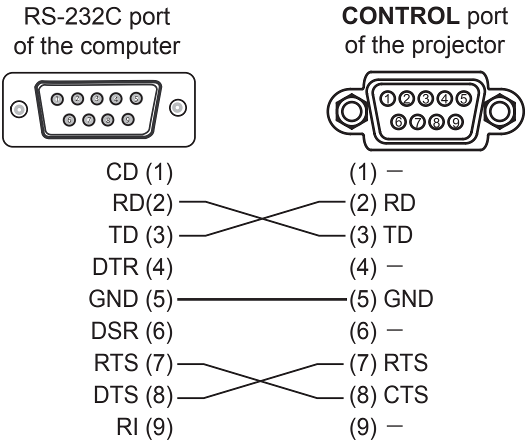
When the projector connects to the computer by RS-232C communication, the projector can be controlled with RS-232C commands from the computer.

For details of RS-232C commands, refer to RS-232C Communication / Network command table (📖*17*).

Connection

1. Turn off the projector and the computer.
2. Connect the projector's **CONTROL** port and the computer's RS-232C port with a RS-232C cable (cross). Use the cable that fulfills the specification shown in figure
3. Turn the computer on, and after the computer has started up turn the projector on.
4. Set the COMMUNICATION TYPE to OFF. (📖***OPTION menu - SERVICE - COMMUNICATION in the User's Manual - Operating Guide***)


RS-232C
CONTROL
RS-232C Cable
(cross)


RS-232C port
of the computer
CONTROL port
of the projector
1 2 3 4 5
6 7 8 9
CD (1)
RD(2)
TD (3)
DTR (4)
GND (5)
DSR (6)
RTS (7)
DTS (8)
RI (9)
(1) –
(2) RD
(3) TD
(4) –
(5) GND
(6) –
(7) RTS
(8) CTS
(9) –

Communicaion settings

1. Protocol

19200bps,8N1

2. Command format ("h" shows hexadecimal)

Byte Number	0	1	2	3	4	5	6	7	8	9	10	11	12
Command	Header							Data					
	Header code		Packet	Data size		CRC flag		Action		Type		Setting code	
Action	L	H		L	H	L	H	L	H	L	H	L	H
<SET>Change setting to desired value [(cL)(cH)] by [(eL)(eH)].	BEh	EFh	03h	06h	00h	(aL)	(aH)	01h	00h	(bL)	(bH)	(cL)	(cH)
<GET>Read projector internal setup value [(bL)(bH)] .						(aL)	(aH)	02h	00h	(bL)	(bH)	00h	00h
<INCREMENT> Increment setup value [(bL)(bH)] by 1.						(aL)	(aH)	04h	00h	(bL)	(bH)	00h	00h
<DECREMENT> Decrement setup value [(bL)(bH)] by 1.						(aL)	(aH)	05h	00h	(bL)	(bH)	00h	00h
<EXECUTE> Run a command [(bL)(bH)].						(aL)	(aH)	06h	00h	(bL)	(bH)	00h	00h

[Header code] [Packet] [Data size]

Set [BEh, EFh, 03h, 06h, 00h] to byte number 0 ~ 4.

[CRC flag]

For byte number 5, 6, refer to RS-232C Communication / Network command table (📖*17*).

[Action]

Set functional code to byte number 7, 8.
<SET> = [01h, 00h], <GET> = [02h, 00h], <INCREMENT> = [04h, 00h]
<DECREMENT> = [05h, 00h], <EXECUTE> = [06h, 00h]
Refer to the Communication command table (📖***above***).

[Type] [Setting code]

For byte number 9 ~ 12, refer to RS-232C Communication / Network command table (📖*17*).

3. Response code / Error code ("h" shows hexadecimal)

(1) ACK reply : 06h

When the projector receives the Set, Increment, Decrement or Execute command correctly, the projector changes the setting data for the specified item by [Type], and it returns the code.

(2) NAK reply : 15h

When the projector cannot understand the received command, the projector returns the error code.

In such a case, check the sending code and send the same command again.

(3) Error reply : 1Ch + 0000h

When the projector cannot execute the received command for any reasons, the projector returns the error code.

In such a case, check the sending code and the setting status of the projector.

(4) Data reply : 1Dh + xxxxh

When the projector receives the GET command correctly, the projector returns the responce code and 2 bytes of data.

NOTE • For connecting the projector to your devices, please read the manual for each device and connect them correctly with suitable cables.

• Operation cannot be guaranteed when the projector receives an undefined command or data.

• Provide an interval of at least 40ms between the response code and any other code.

• The projector outputs test data when the power supply is switched ON and when the lamp is lit. Ignore this data.

• Commands are not accepted during warm-up.

• When the data length is greater than indicated by the data length code, the projector ignore the excess data code. Conversely when the data length is shorter than indicated by the data length code, the projector returns the error code to the computer.

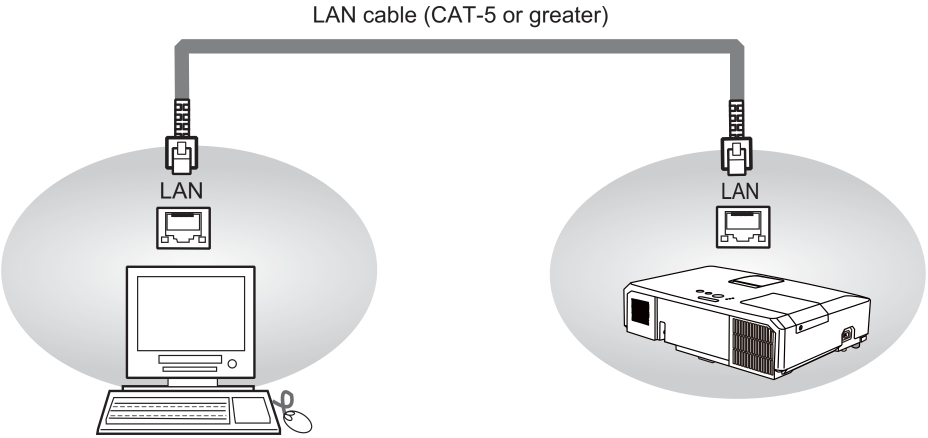
Command Control via the Network

When the projector connects network, the projector can be controlled with RS-232C commands from the computer with web browser.

For details of RS-232C commands, refer to RS-232C Communication / Network command table (📖*17*).

Connection

1. Turn off the projector and the computer.
2. Connect the projector's **LAN** port and the computer's LAN port with a LAN cable. Use the cable that fulfills the specification shown in figure (Use CAT-5 or greater LAN Cable when LAN ports are used)
3. Turn the computer on and after the computer has started up turn the projector on.



Communicaion Port

The following two ports are assigned for the command control.

TCP #23
TCP #9715

Configure the following items form a web browser when command control is used.

Port Settings		
Network Control Port1 (Port: 23)	Port open	Click the **[Enable]** check box to open **[Network Control Port1 (Port: 23)]** to use TCP #23. Default setting is “Enable”.
	Authentication	Click the **[Enable]** check box for the **[Authentication]** setting when authentication is required. Default setting is “Disable”.
Network Control Port2 (Port: 9715)	Port open	Click the **[Enable]** check box to open **[Network Control Port2 (Port: 9715)]** to use TCP #9715. Default setting is “Enable”.
	Authentication	Click the **[Enable]** check box for the **[Authentication]** setting when authentication is required. Default setting is “Enable”.

When the authentication setting is enabled, the following settings are required.

Security Settings		
Network Control	Authentication Password	Enter the desired authentication password. This setting will be the same for **[Network Control Port1 (Port: 23)]** and **[Network Control Port2 (Port: 9715)]**. Default setting is blank.
	Re-enter Authentication Password	

Command control settings

[TCP #23]

1. Command format

Same as RS-232C communication, refer to RS-232C Communicaton command format.

2. Response code / Error code ("h" shows hexadecimal)

Four of the response / error code used for TCP#23 are the same as RS-232C Communication (1)~(4). One authentication error reply (5) is added.

(1) ACK reply : 06h

Refer to RS-232C communication (📖*10*).

(2) NAK reply : 15h

Refer to RS-232C communication (📖*10*).

(3) Error reply : 1Ch + 0000h

Refer to RS-232C communication (📖*10*).

(4) Data reply : 1Dh + xxxxh

Refer to RS-232C communication (📖*10*).

(5) Authentication error reply : 1Fh + 0400h

When authentication error occurred, the projector returns the error code.

[TCP #9715]

1. Command format

The commands some datum are added to the head and the end of the ones of TCP#9715 are used.

Header	Data length	RS-232C command	Check sum	Connection ID
0×02	0×0D	13 bytes	1 byte	1 byte

[Header]

02, Fixed

[Data Length]

RS-232C commands byte length (0×0D, Fixed)

[RS-232C commands]

Refer to RS-232C Communication command format (📖*10*).

[Check Sum]

This is the value to make zero on the addition of the lower 8 bits from the header to the checksum.

[Connection ID]

Random value from 0 to 255 (This value is attached to the reply data).

NOTE • Operation cannot be guaranteed when the projector receives an undefined command or data.

• Provide an interval of at least 40ms between the response code and any other code.

• Commands are not accepted during warm-up.

2. Response code / Error code ("h" shows hexadecimal)

The connection ID is attached for the TCP#23's response / error codes are used. The connection ID is same as the sending command format.

(1) ACK reply : 06h + ××h (××h : connection ID)

(2) NAK reply : 15h + ××h

(3) Error reply : 1Ch + 0000h + ××h

(4) Data reply : 1Dh + xxxxh + ××h

(5) Authentication error reply : 1Fh + 0400h + ××h

(6) Projector busy reply: 1Fh + ××××h + ××h

When the projector is too busy to receives the command, the projector returns the error code.

In such a case, check the sending code and send the same command again.

Automatic Connection Break

The TCP connection will be automatically disconnected after there is no communication for 30 seconds after being established.

Authentication

The projector does not accept commands without authentication success when authentication is enabled. The projector uses a challenge response type authentication with an MD5 (Message Digest 5) algorithm. When the projector is using a LAN, a random 8 bytes will be returned if authentication is enabled. Bind this received 8 bytes and the authentication password and digest this data with the MD5 algorithm and add this in front of the commands to send.

Following is a sample if the authentication password is set to “password” and the random 8 bytes are “a572f60c”.

1) Select the projector.
2) Receive the random 8 bytes “a572f60c” from the projector.
3) Bind the random 8 bytes “a572f60c” and the authentication password “password” and it becomes “a572f60cpassword”.
4) Digest this bind “a572f60cpassword” with MD5 algorithm.
   It will be “e3d97429adffa11bce1f7275813d4bde”.
5) Add this “e3d97429adffa11bce1f7275813d4bde” in front of the commands and send the data.
   Send “e3d97429adffa11bce1f7275813d4bde”+command.
6) When the sending data is correct, the command will be performed and the reply data will be returned. Otherwise, an authentication error will be returned.

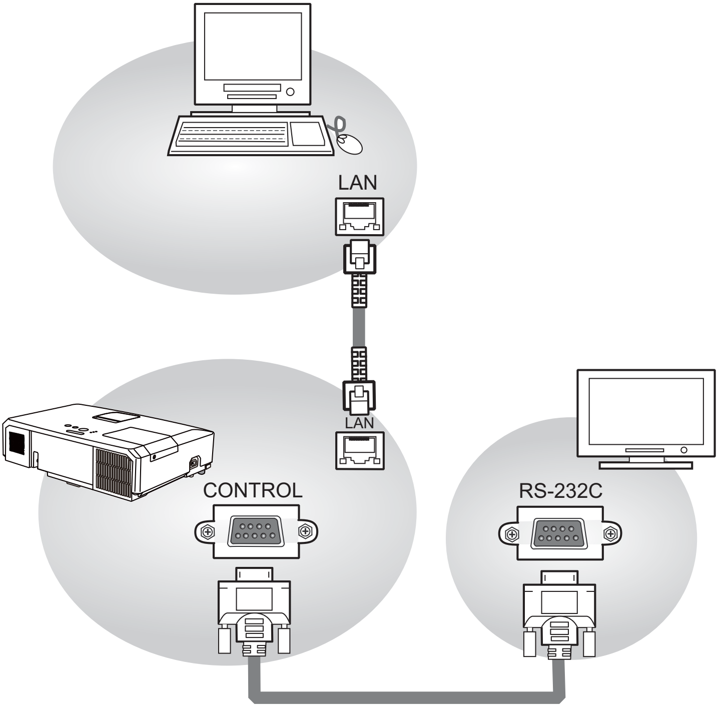
NOTE • As for the transmission of the second or subsequent commands, the authentication data can be omitted when the same connection.

Network Bridge Communication

This projector is equipped with NETWORK BRIDGE function.
When the projector connects to the computer by LAN communicaton, an external device that is connected with this projector by RS-232C communication can be controlled from the computer as a network terminal.
For details, see the **3.7 Controlling the external device via the projector(using the NETWORK BRIDGE function) - Network Guide.**

Connection

1. Connect the computer's LAN port and the projector's **LAN** port with a LAN cable.
2. Connect the projector's **CONTROL** port and the RS-232C port of the devices that you want to control with a RS-232C cable.
3. Turn the computer on and after the computer has started up turn the projector on.
4. Set the COMMUNICATION TYPE to NETWORK BRIDGE. (📖***OPTION menu - SERVICE - COMMUNICATION in the User's Manual - Operating Guide***)



Communication settings

For communication setting, use the OPTION - SERVICE - COMMUNICATION menu. (📖***OPTION menu - SERVICE - COMMUNICATION in the User's Manual - Operating Guide***)

Item	Condition
BAUD RATE	4800bps / 9600bps / 19200bps / 38400bps
Data length	8 bit (fixed)
PARITY	NONE/ODD/EVEN
Start bit	1 bit (fixed)
Stop bit	1 bit (fixed)
Transmission method	HALF-DUPLEX/FULL-DUPLEX

NOTE • For connecting the projector to your devices, please read the manual for each device and connect them correctly with suitable cables.
• Turn off (the power of) both the projector and other devices and unplug before connecting them.
• For details of Transmission method, refer to **3.8.4 Transmission method- Network Guide**.

RS-232C Communication / Network command table

Names	Operation Type		Header				Command Data		
						CRC	Action	Type	Setting code
Power	Set	Turn off	BE EF	03	06 00	2A D3	01 00	00 60	00 00
		Turn on	BE EF	03	06 00	BA D2	01 00	00 60	01 00
	Get		BE EF	03	06 00	19 D3	02 00	00 60	00 00
			[Example return] 00 00 [Off] 01 00 [On] 02 00 [Cool down]						
Input Source	Set	COMPUTER IN1	BE EF	03	06 00	FE D2	01 00	00 20	00 00
		COMPUTER IN2	BE EF	03	06 00	3E D0	01 00	00 20	04 00
		HDMI	BE EF	03	06 00	0E D2	01 00	00 20	03 00
		COMPONENT	BE EF	03	06 00	AE D1	01 00	00 20	05 00
		S-VIDEO	BE EF	03	06 00	9E D3	01 00	00 20	02 00
		VIDEO	BE EF	03	06 00	6E D3	01 00	00 20	01 00
		USB TYPE A	BE EF	03	06 00	5E D1	01 00	00 20	06 00
		LAN	BE EF	03	06 00	CE D5	01 00	00 20	0B 00
		USB TYPE B	BE EF	03	06 00	FE D7	01 00	00 20	0C 00
	Get		BE EF	03	06 00	CD D2	02 00	00 20	00 00
Error Status	Get		BE EF	03	06 00	D9 D8	02 00	20 60	00 00
			[Example return] 00 00 [Normal] 01 00 [Cover error] 02 00 [Fan error] 03 00 [Lamp error] 04 00 [Temp error] 05 00 [Air flow error] 07 00 [Cold error] 08 00 [Filter error]						
MAGNIFY	Get		BE EF	03	06 00	7C D2	02 00	07 30	00 00
	Increment		BE EF	03	06 00	1A D2	04 00	07 30	00 00
	Decrement		BE EF	03	06 00	CB D3	05 00	07 30	00 00
FREEZE	Set	NORMAL	BE EF	03	06 00	83 D2	01 00	02 30	00 00
		FREEZE	BE EF	03	06 00	13 D3	01 00	02 30	01 00
	Get		BE EF	03	06 00	B0 D2	02 00	02 30	00 00
PICTURE MODE	Set	NORMAL	BE EF	03	06 00	23 F6	01 00	BA 30	00 00
		CINEMA	BE EF	03	06 00	B3 F7	01 00	BA 30	01 00
		DYNAMIC	BE EF	03	06 00	E3 F4	01 00	BA 30	04 00
		BOARD(BLACK)	BE EF	03	06 00	E3 EF	01 00	BA 30	20 00
		BOARD(GREEN)	BE EF	03	06 00	73 EE	01 00	BA 30	21 00
		WHITEBOARD	BE EF	03	06 00	83 EE	01 00	BA 30	22 00
		DAYTIME	BE EF	03	06 00	E3 C7	01 00	BA 30	40 00
	Get		BE EF	03	06 00	10 F6	02 00	BA 30	00 00
			[Example return] 00 00 [Normal] 01 00 [Cinema] 04 00 [Dynamic] 10 00 [Custom] 20 00 [BOARD(BLACK)] 21 00 [BOARD(GREEN)] 22 00 [WHITEBOARD] 40 00 [DAY TIME]						
BRIGHTNESS	Get		BE EF	03	06 00	89 D2	02 00	03 20	00 00
	Increment		BE EF	03	06 00	EF D2	04 00	03 20	00 00
	Decrement		BE EF	03	06 00	3E D3	05 00	03 20	00 00
BRIGHTNESS Reset	Execute		BE EF	03	06 00	58 D3	06 00	00 70	00 00
CONTRAST	Get		BE EF	03	06 00	FD D3	02 00	04 20	00 00
	Increment		BE EF	03	06 00	9B D3	04 00	04 20	00 00
	Decrement		BE EF	03	06 00	4A D2	05 00	04 20	00 00

(continued on next page)

RS-232C Communication / Network command table (continued)

Names	Operation Type		Header				Command Data		
						CRC	Action	Type	Setting code
CONTRAST Reset	Execute		BE EF	03	06 00	A4 D2	06 00	01 70	00 00
GAMMA	Set	1 DEFAULT	BE EF	03	06 00	07 E9	01 00	A1 30	20 00
		1 CUSTOM	BE EF	03	06 00	07 FD	01 00	A1 30	10 00
		2 DEFAULT	BE EF	03	06 00	97 E8	01 00	A1 30	21 00
		2 CUSTOM	BE EF	03	06 00	97 FC	01 00	A1 30	11 00
		3 DEFAULT	BE EF	03	06 00	67 E8	01 00	A1 30	22 00
		3 CUSTOM	BE EF	03	06 00	67 FC	01 00	A1 30	12 00
		4 DEFAULT	BE EF	03	06 00	F7 E9	01 00	A1 30	23 00
		4 CUSTOM	BE EF	03	06 00	F7 FD	01 00	A1 30	13 00
		5 DEFAULT	BE EF	03	06 00	C7 EB	01 00	A1 30	24 00
		5 CUSTOM	BE EF	03	06 00	C7 FF	01 00	A1 30	14 00
		6 DEFAULT	BE EF	03	06 00	57 EA	01 00	A1 30	25 00
		6 CUSTOM	BE EF	03	06 00	57 FE	01 00	A1 30	15 00
	Get		BE EF	03	06 00	F4 F0	02 00	A1 30	00 00
User Gamma Pattern	Set	Off	BE EF	03	06 00	FB FA	01 00	80 30	00 00
		9 steps gray scale	BE EF	03	06 00	6B FB	01 00	80 30	01 00
		15 steps gray scale	BE EF	03	06 00	9B FB	01 00	80 30	02 00
		Ramp	BE EF	03	06 00	0B FA	01 00	80 30	03 00
	Get		BE EF	03	06 00	C8 FA	02 00	80 30	00 00
User Gamma Point 1	Get		BE EF	03	06 00	08 FE	02 00	90 30	00 00
	Increment		BE EF	03	06 00	6E FE	04 00	90 30	00 00
	Decrement		BE EF	03	06 00	BF FF	05 00	90 30	00 00
User Gamma Point 1 Reset	Execute		BE EF	03	06 00	58 C2	06 00	50 70	00 00
User Gamma Point 2	Get		BE EF	03	06 00	F4 FF	02 00	91 30	00 00
	Increment		BE EF	03	06 00	92 FF	04 00	91 30	00 00
	Decrement		BE EF	03	06 00	43 FE	05 00	91 30	00 00
User Gamma Point 2 Reset	Execute		BE EF	03	06 00	A4 C3	06 00	51 70	00 00
User Gamma Point 3	Get		BE EF	03	06 00	B0 FF	02 00	92 30	00 00
	Increment		BE EF	03	06 00	D6 FF	04 00	92 30	00 00
	Decrement		BE EF	03	06 00	07 FE	05 00	92 30	00 00
User Gamma Point 3 Reset	Execute		BE EF	03	06 00	E0 C3	06 00	52 70	00 00
User Gamma Point 4	Get		BE EF	03	06 00	4C FE	02 00	93 30	00 00
	Increment		BE EF	03	06 00	2A FE	04 00	93 30	00 00
	Decrement		BE EF	03	06 00	FB FF	05 00	93 30	00 00
User Gamma Point 4 Reset	Execute		BE EF	03	06 00	1C C2	06 00	53 70	00 00
User Gamma Point 5	Get		BE EF	03	06 00	38 FF	02 00	94 30	00 00
	Increment		BE EF	03	06 00	5E FF	04 00	94 30	00 00
	Decrement		BE EF	03	06 00	8F FE	05 00	94 30	00 00
User Gamma Point 5 Reset	Execute		BE EF	03	06 00	68 C3	06 00	54 70	00 00
User Gamma Point 6	Get		BE EF	03	06 00	C4 FE	02 00	95 30	00 00
	Increment		BE EF	03	06 00	A2 FE	04 00	95 30	00 00
	Decrement		BE EF	03	06 00	73 FF	05 00	95 30	00 00
User Gamma Point 6 Reset	Execute		BE EF	03	06 00	94 C2	06 00	55 70	00 00

(continued on next page)

Names	Operation Type		Header				Command Data		
						CRC	Action	Type	Setting code
User Gamma Point 7	Get		BE EF	03	06 00	80 FE	02 00	96 30	00 00
	Increment		BE EF	03	06 00	E6 FE	04 00	96 30	00 00
	Decrement		BE EF	03	06 00	37 FF	05 00	96 30	00 00
User Gamma Point 7 Reset	Execute		BE EF	03	06 00	D0 C2	06 00	56 70	00 00
User Gamma Point 8	Get		BE EF	03	06 00	7C FF	02 00	97 30	00 00
	Increment		BE EF	03	06 00	1A FF	04 00	97 30	00 00
	Decrement		BE EF	03	06 00	CB FE	05 00	97 30	00 00
User Gamma Point 8 Reset	Execute		BE EF	03	06 00	2C C3	06 00	57 70	00 00
COLOR TEMP	Set	1 HIGH	BE EF	03	06 00	0B F5	01 00	B0 30	03 00
		1 CUSTOM	BE EF	03	06 00	CB F8	01 00	B0 30	13 00
		2 MID	BE EF	03	06 00	9B F4	01 00	B0 30	02 00
		2 CUSTOM	BE EF	03	06 00	5B F9	01 00	B0 30	12 00
		3 LOW	BE EF	03	06 00	6B F4	01 00	B0 30	01 00
		3 CUSTOM	BE EF	03	06 00	AB F9	01 00	B0 30	11 00
		4 Hi-BRIGHT-1	BE EF	03	06 00	3B F2	01 00	B0 30	08 00
		4 CUSTOM	BE EF	03	06 00	FB FF	01 00	B0 30	18 00
		5 Hi-BRIGHT-2	BE EF	03	06 00	AB F3	01 00	B0 30	09 00
		5 CUSTOM	BE EF	03	06 00	6B FE	01 00	B0 30	19 00
		6 Hi-BRIGHT-3	BE EF	03	06 00	5B F3	01 00	B0 30	0A 00
		6 CUSTOM	BE EF	03	06 00	9B FE	01 00	B0 30	1A 00
	Get		BE EF	03	06 00	C8 F5	02 00	B0 30	00 00
COLOR TEMP GAIN R	Get		BE EF	03	06 00	34 F4	02 00	B1 30	00 00
	Increment		BE EF	03	06 00	52 F4	04 00	B1 30	00 00
	Decrement		BE EF	03	06 00	83 F5	05 00	B1 30	00 00
COLOR TEMP GAIN R Reset	Execute		BE EF	03	06 00	10 C6	06 00	46 70	00 00
COLOR TEMP GAIN G	Get		BE EF	03	06 00	70 F4	02 00	B2 30	00 00
	Increment		BE EF	03	06 00	16 F4	04 00	B2 30	00 00
	Decrement		BE EF	03	06 00	C7 F5	05 00	B2 30	00 00
COLOR TEMP GAIN G Reset	Execute		BE EF	03	06 00	EC C7	06 00	47 70	00 00
COLOR TEMP GAIN B	Get		BE EF	03	06 00	8C F5	02 00	B3 30	00 00
	Increment		BE EF	03	06 00	EA F5	04 00	B3 30	00 00
	Decrement		BE EF	03	06 00	3B F4	05 00	B3 30	00 00
COLOR TEMP GAIN B Reset	Execute		BE EF	03	06 00	F8 C4	06 00	48 70	00 00
COLOR TEMP OFFSET R	Get		BE EF	03	06 00	04 F5	02 00	B5 30	00 00
	Increment		BE EF	03	06 00	62 F5	04 00	B5 30	00 00
	Decrement		BE EF	03	06 00	B3 F4	05 00	B5 30	00 00
COLOR TEMP OFFSET R Reset	Execute		BE EF	03	06 00	40 C5	06 00	4A 70	00 00
COLOR TEMP OFFSET G	Get		BE EF	03	06 00	40 F5	02 00	B6 30	00 00
	Increment		BE EF	03	06 00	26 F5	04 00	B6 30	00 00
	Decrement		BE EF	03	06 00	F7 F4	05 00	B6 30	00 00
COLOR TEMP OFFSET G Reset	Execute		BE EF	03	06 00	BC C4	06 00	4B 70	00 00

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Names	Operation Type		Header				Command Data		
						CRC	Action	Type	Setting code
COLOR TEMP OFFSET B	Get		BE EF	03	06 00	BC F4	02 00	B7 30	00 00
	Increment		BE EF	03	06 00	DA F4	04 00	B7 30	00 00
	Decrement		BE EF	03	06 00	0B F5	05 00	B7 30	00 00
COLOR TEMP OFFSET B Reset	Execute		BE EF	03	06 00	C8 C5	06 00	4C 70	00 00
COLOR	Get		BE EF	03	06 00	B5 72	02 00	02 22	00 00
	Increment		BE EF	03	06 00	D3 72	04 00	02 22	00 00
	Decrement		BE EF	03	06 00	02 73	05 00	02 22	00 00
COLOR Reset	Execute		BE EF	03	06 00	80 D0	06 00	0A 70	00 00
TINT	Get		BE EF	03	06 00	49 73	02 00	03 22	00 00
	Increment		BE EF	03	06 00	2F 73	04 00	03 22	00 00
	Decrement		BE EF	03	06 00	FE 72	05 00	03 22	00 00
TINT Reset	Execute		BE EF	03	06 00	7C D1	06 00	0B 70	00 00
SHARPNESS	Get		BE EF	03	06 00	F1 72	02 00	01 22	00 00
	Increment		BE EF	03	06 00	97 72	04 00	01 22	00 00
	Decrement		BE EF	03	06 00	46 73	05 00	01 22	00 00
SHARPNESS Reset	Execute		BE EF	03	06 00	C4 D0	06 00	09 70	00 00
ACTIVE IRIS	Set	OFF	BE EF	03	06 00	0B 22	01 00	04 33	00 00
		THEATER	BE EF	03	06 00	CB 2F	01 00	04 33	10 00
		PRESENTATION	BE EF	03	06 00	5B 2E	01 00	04 33	11 00
	Get		BE EF	03	06 00	38 22	02 00	04 33	00 00
MY MEMORY Load	Set	1	BE EF	03	06 00	0E D7	01 00	14 20	00 00
		2	BE EF	03	06 00	9E D6	01 00	14 20	01 00
		3	BE EF	03	06 00	6E D6	01 00	14 20	02 00
		4	BE EF	03	06 00	FE D7	01 00	14 20	03 00
MY MEMORY Save	Set	1	BE EF	03	06 00	F2 D6	01 00	15 20	00 00
		2	BE EF	03	06 00	62 D7	01 00	15 20	01 00
		3	BE EF	03	06 00	92 D7	01 00	15 20	02 00
		4	BE EF	03	06 00	02 D6	01 00	15 20	03 00
ASPECT	Set	4:3	BE EF	03	06 00	9E D0	01 00	08 20	00 00
		16:9	BE EF	03	06 00	0E D1	01 00	08 20	01 00
		16:10	BE EF	03	06 00	3E D6	01 00	08 20	0A 00
		14:9	BE EF	03	06 00	CE D6	01 00	08 20	09 00
		(*) NATIVE	BE EF	03	06 00	5E D7	01 00	08 20	08 00
		NORMAL	BE EF	03	06 00	5E DD	01 00	08 20	10 00
	Get		BE EF	03	06 00	AD D0	02 00	08 20	00 00
OVER SCAN	Get		BE EF	03	06 00	91 70	02 00	09 22	00 00
	Increment		BE EF	03	06 00	F7 70	04 00	09 22	00 00
	Decrement		BE EF	03	06 00	26 71	05 00	09 22	00 00
OVER SCAN Reset	Execute		BE EF	03	06 00	EC D9	06 00	27 70	00 00
V POSITION	Get		BE EF	03	06 00	0D 83	02 00	00 21	00 00
	Increment		BE EF	03	06 00	6B 83	04 00	00 21	00 00
	Decrement		BE EF	03	06 00	BA 82	05 00	00 21	00 00
V POSITION Reset	Execute		BE EF	03	06 00	E0 D2	06 00	02 70	00 00

(*) only for CP-WX4021N

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Names	Operation Type		Header				Command Data		
						CRC	Action	Type	Setting code
H POSITION	Get		BE EF	03	06 00	F1 82	02 00	01 21	00 00
	Increment		BE EF	03	06 00	97 82	04 00	01 21	00 00
	Decrement		BE EF	03	06 00	46 83	05 00	01 21	00 00
H POSITION Reset	Execute		BE EF	03	06 00	1C D3	06 00	03 70	00 00
H PHASE	Get		BE EF	03	06 00	49 83	02 00	03 21	00 00
	Increment		BE EF	03	06 00	2F 83	04 00	03 21	00 00
	Decrement		BE EF	03	06 00	FE 82	05 00	03 21	00 00
H SIZE	Get		BE EF	03	06 00	B5 82	02 00	02 21	00 00
	Increment		BE EF	03	06 00	D3 82	04 00	02 21	00 00
	Decrement		BE EF	03	06 00	02 83	05 00	02 21	00 00
H SIZE Reset	Execute		BE EF	03	06 00	68 D2	06 00	04 70	00 00
AUTO ADJUST EXECUTE	Execute		BE EF	03	06 00	91 D0	06 00	0A 20	00 00
PROGRESSIVE	Set	OFF	BE EF	03	06 00	4A 72	01 00	07 22	00 00
		TV	BE EF	03	06 00	DA 73	01 00	07 22	01 00
		FILM	BE EF	03	06 00	2A 73	01 00	07 22	02 00
	Get		BE EF	03	06 00	79 72	02 00	07 22	00 00
VIDEO NR	Set	LOW	BE EF	03	06 00	26 72	01 00	06 22	01 00
		MID	BE EF	03	06 00	D6 72	01 00	06 22	02 00
		HIGH	BE EF	03	06 00	46 73	01 00	06 22	03 00
	Get		BE EF	03	06 00	85 73	02 00	06 22	00 00
COLOR SPACE	Set	AUTO	BE EF	03	06 00	0E 72	01 00	04 22	00 00
		RGB	BE EF	03	06 00	9E 73	01 00	04 22	01 00
		SMPTE240	BE EF	03	06 00	6E 73	01 00	04 22	02 00
		REC709	BE EF	03	06 00	FE 72	01 00	04 22	03 00
		REC601	BE EF	03	06 00	CE 70	01 00	04 22	04 00
	Get		BE EF	03	06 00	3D 72	02 00	04 22	00 00
COMPONENT	Set	COMPONENT	BE EF	03	06 00	4A D7	01 00	17 20	00 00
		SCART RGB	BE EF	03	06 00	DA D6	01 00	17 20	01 00
	Get		BE EF	03	06 00	79 D7	02 00	17 20	00 00
S-VIDEO FORMAT	Set	AUTO	BE EF	03	06 00	E6 70	01 00	12 22	0A 00
		NTSC	BE EF	03	06 00	86 74	01 00	12 22	04 00
		PAL	BE EF	03	06 00	16 75	01 00	12 22	05 00
		SECAM	BE EF	03	06 00	16 70	01 00	12 22	09 00
		NTSC4.43	BE EF	03	06 00	26 77	01 00	12 22	02 00
		M-PAL	BE EF	03	06 00	86 71	01 00	12 22	08 00
		N-PAL	BE EF	03	06 00	76 74	01 00	12 22	07 00
	Get		BE EF	03	06 00	75 76	02 00	12 22	00 00
C-VIDEO FORMAT	Set	AUTO	BE EF	03	06 00	A2 70	01 00	11 22	0A 00
		NTSC	BE EF	03	06 00	C2 74	01 00	11 22	04 00
		PAL	BE EF	03	06 00	52 75	01 00	11 22	05 00
		SECAM	BE EF	03	06 00	52 70	01 00	11 22	09 00
		NTSC4.43	BE EF	03	06 00	62 77	01 00	11 22	02 00
		M-PAL	BE EF	03	06 00	C2 71	01 00	11 22	08 00
		N-PAL	BE EF	03	06 00	32 74	01 00	11 22	07 00
	Get		BE EF	03	06 00	31 76	02 00	11 22	00 00

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RS-232C Communication / Network command table (continued)

Names	Operation Type		Header				Command Data		
						CRC	Action	Type	Setting code
HDMI FORMAT	Set	AUTO	BE EF	03	06 00	BA 77	01 00	13 22	00 00
		VIDEO	BE EF	03	06 00	2A 76	01 00	13 22	01 00
		COMPUTER	BE EF	03	06 00	DA 76	01 00	13 22	02 00
	Get		BE EF	03	06 00	89 77	02 00	13 22	00 00
HDMI RANGE	Set	AUTO	BE EF	03	06 00	86 D8	01 00	22 20	00 00
		NORMAL	BE EF	03	06 00	16 D9	01 00	22 20	01 00
		ENHANCED	BE EF	03	06 00	E6 D9	01 00	22 20	02 00
	Get		BE EF	03	06 00	B5 D8	02 00	22 20	00 00
COMPUTER IN1	Set	AUTO	BE EF	03	06 00	CE D6	01 00	10 20	03 00
		SYNC ON G OFF	BE EF	03	06 00	5E D7	01 00	10 20	02 00
	Get		BE EF	03	06 00	0D D6	02 00	10 20	00 00
COMPUTER IN2	Set	AUTO	BE EF	03	06 00	32 D7	01 00	11 20	03 00
		SYNC ON G OFF	BE EF	03	06 00	A2 D6	01 00	11 20	02 00
	Get		BE EF	03	06 00	F1 D7	02 00	11 20	00 00
FRAME LOCK – COMPUTER IN1	Set	OFF	BE EF	03	06 00	3B C2	01 00	50 30	00 00
		ON	BE EF	03	06 00	AB C3	01 00	50 30	01 00
	Get		BE EF	03	06 00	08 C2	02 00	50 30	00 00
FRAME LOCK – COMPUTER IN2	Set	OFF	BE EF	03	06 00	0B C3	01 00	54 30	00 00
		ON	BE EF	03	06 00	9B C2	01 00	54 30	01 00
	Get		BE EF	03	06 00	38 C3	02 00	54 30	00 00
FRAME LOCK - HDMI	Set	OFF	BE EF	03	06 00	7F C2	01 00	53 30	00 00
		ON	BE EF	03	06 00	EF C3	01 00	53 30	01 00
	Get		BE EF	03	06 00	4C C2	02 00	53 30	00 00
AUTO KEYSTONE V EXECUTE	Execute		BE EF	03	06 00	E5 D1	06 00	0D 20	00 00
KEYSTONE V	Get		BE EF	03	06 00	B9 D3	02 00	07 20	00 00
	Increment		BE EF	03	06 00	DF D3	04 00	07 20	00 00
	Decrement		BE EF	03	06 00	0E D2	05 00	07 20	00 00
KEYSTONE V Reset	Execute		BE EF	03	06 00	08 D0	06 00	0C 70	00 00
KEYSTONE H	Get		BE EF	03	06 00	E9 D0	02 00	0B 20	00 00
	Increment		BE EF	03	06 00	8F D0	04 00	0B 20	00 00
	Decrement		BE EF	03	06 00	5E D1	05 00	0B 20	00 00
KEYSTONE H Reset	Execute		BE EF	03	06 00	98 D8	06 00	20 70	00 00
PERFECT FIT	Set	Disable	BE EF	03	06 00	FE 88	01 00	20 21	00 00
		Enable	BE EF	03	06 00	6E 89	01 00	20 21	00 00
	Get		BE EF	03	06 00	CD 88	02 00	20 21	00 00
PERFECT FIT Left Top -H	Get		BE EF	03	06 00	31 89	02 00	21 21	00 00
	Increment		BE EF	03	06 00	57 89	04 00	21 21	00 00
	Decrement		BE EF	03	06 00	86 88	05 00	21 21	00 00
PERFECT FIT Left Top -V	Get		BE EF	03	06 00	75 89	02 00	22 21	00 00
	Increment		BE EF	03	06 00	13 89	04 00	22 21	00 00
	Decrement		BE EF	03	06 00	C2 88	05 00	22 21	00 00
PERFECT FIT Right Top -H	Get		BE EF	03	06 00	89 88	02 00	23 21	00 00
	Increment		BE EF	03	06 00	EF 88	04 00	23 21	00 00
	Decrement		BE EF	03	06 00	3E 89	05 00	23 21	00 00
PERFECT FIT Right Top -V	Get		BE EF	03	06 00	FD 89	02 00	24 21	00 00
	Increment		BE EF	03	06 00	9B 89	04 00	24 21	00 00
	Decrement		BE EF	03	06 00	4A 88	05 00	24 21	00 00

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Names	Operation Type		Header				Command Data		
						CRC	Action	Type	Setting code
PERFECT FIT Left Bottom -H	Get		BE EF	03	06 00	01 88	02 00	25 21	00 00
	Increment		BE EF	03	06 00	67 88	04 00	25 21	00 00
	Decrement		BE EF	03	06 00	B6 89	05 00	25 21	00 00
PERFECT FIT Left Bottom -V	Get		BE EF	03	06 00	45 88	02 00	26 21	00 00
	Increment		BE EF	03	06 00	23 88	04 00	26 21	00 00
	Decrement		BE EF	03	06 00	F2 89	05 00	26 21	00 00
PERFECT FIT Right Bottom -H	Get		BE EF	03	06 00	B9 89	02 00	27 21	00 00
	Increment		BE EF	03	06 00	DF 89	04 00	27 21	00 00
	Decrement		BE EF	03	06 00	0E 88	05 00	27 21	00 00
PERFECT FIT Right Bottom -V	Get		BE EF	03	06 00	AD 8A	02 00	28 21	00 00
	Increment		BE EF	03	06 00	CB 8A	04 00	28 21	00 00
	Decrement		BE EF	03	06 00	1A 8B	05 00	28 21	00 00
PERFECT FIT Reset	Execute		BE EF	03	06 00	D5 8A	06 00	29 21	00 00
PERFECT FIT Left Side Distortion	Get		BE EF	03	06 00	31 97	02 00	41 21	00 00
	Increment		BE EF	03	06 00	57 97	04 00	41 21	00 00
	Decrement		BE EF	03	06 00	86 96	05 00	41 21	00 00
PERFECT FIT Right Side Distortion	Get		BE EF	03	06 00	75 97	02 00	42 21	00 00
	Increment		BE EF	03	06 00	13 97	04 00	42 21	00 00
	Decrement		BE EF	03	06 00	C2 96	05 00	42 21	00 00
PERFECT FIT Distortion Position V	Get		BE EF	03	06 00	89 96	02 00	43 21	00 00
	Increment		BE EF	03	06 00	EF 96	04 00	43 21	00 00
	Decrement		BE EF	03	06 00	3E 97	05 00	43 21	00 00
PERFECT FIT Top Side Distortion	Get		BE EF	03	06 00	FD 97	02 00	44 21	00 00
	Increment		BE EF	03	06 00	9B 97	04 00	44 21	00 00
	Decrement		BE EF	03	06 00	4A 96	05 00	44 21	00 00
PERFECT FIT Bottom Side Distortion	Get		BE EF	03	06 00	01 96	02 00	45 21	00 00
	Increment		BE EF	03	06 00	67 96	04 00	45 21	00 00
	Decrement		BE EF	03	06 00	B6 97	05 00	45 21	00 00
PERFECT FIT Distortion Position H	Get		BE EF	03	06 00	45 96	02 00	46 21	00 00
	Increment		BE EF	03	06 00	23 96	04 00	46 21	00 00
	Decrement		BE EF	03	06 00	F2 97	05 00	46 21	00 00
PERFECT FIT All Sides Reset	Execute		BE EF	03	06 00	3D 96	06 00	47 21	00 00
AUTO ECO MODE	Set	OFF	BE EF	03	06 00	FB 27	01 00	10 33	00 00
		ON	BE EF	03	06 00	6B 26	01 00	10 33	01 00
	Get		BE EF	03	06 00	C8 27	02 00	10 33	00 00
ECO MODE	Set	NORMAL	BE EF	03	06 00	3B 23	01 00	00 33	00 00
		ECO	BE EF	03	06 00	AB 22	01 00	00 33	01 00
	Get		BE EF	03	06 00	08 23	02 00	00 33	00 00
MIRROR	Set	NORMAL	BE EF	03	06 00	C7 D2	01 00	01 30	00 00
		H:INVERT	BE EF	03	06 00	57 D3	01 00	01 30	01 00
		V:INVERT	BE EF	03	06 00	A7 D3	01 00	01 30	02 00
		H&V:INVERT	BE EF	03	06 00	37 D2	01 00	01 30	03 00
	Get		BE EF	03	06 00	F4 D2	02 00	01 30	00 00
STANDBY MODE	Set	NORMAL	BE EF	03	06 00	D6 D2	01 00	01 60	00 00
		SAVING	BE EF	03	06 00	46 D3	01 00	01 60	01 00
	Get		BE EF	03	06 00	E5 D2	02 00	01 60	00 00

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Names	Operation Type		Header				Command Data		
						CRC	Action	Type	Setting code
MONITOR OUT - COMPUTER IN1	Set	COMPUTER IN1	BE EF	03	06 00	3E F4	01 00	B0 20	00 00
		OFF	BE EF	03	06 00	CE B5	01 00	B0 20	FF 00
	Get		BE EF	03	06 00	0D F4	02 00	B0 20	00 00
MONITOR OUT - COMPUTER IN2	Set	COMPUTER IN2	BE EF	03	06 00	CE F7	01 00	B4 20	04 00
		OFF	BE EF	03	06 00	FE B4	01 00	B4 20	FF 00
	Get		BE EF	03	06 00	3D F5	02 00	B4 20	00 00
MONITOR OUT - COMPONENT	Set	COMPUTER IN1	BE EF	03	06 00	F2 F4	01 00	B5 20	00 00
		COMPUTER IN2	BE EF	03	06 00	32 F6	01 00	B5 20	04 00
		OFF	BE EF	03	06 00	02 B5	01 00	B5 20	FF 00
	Get		BE EF	03	06 00	C1 F4	02 00	B5 20	00 00
MONITOR OUT - S-VIDEO	Set	COMPUTER IN1	BE EF	03	06 00	86 F5	01 00	B2 20	00 00
		COMPUTER IN2	BE EF	03	06 00	46 F7	01 00	B2 20	04 00
		OFF	BE EF	03	06 00	76 B4	01 00	B2 20	FF 00
	Get		BE EF	03	06 00	B5 F5	02 00	B2 20	00 00
MONITOR OUT - VIDEO	Set	COMPUTER IN1	BE EF	03	06 00	C2 F5	01 00	B1 20	00 00
		COMPUTER IN2	BE EF	03	06 00	02 F7	01 00	B1 20	04 00
		OFF	BE EF	03	06 00	32 B4	01 00	B1 20	FF 00
	Get		BE EF	03	06 00	F1 F5	02 00	B1 20	00 00
MONITOR OUT - HDMI	Set	COMPUTER1	BE EF	03	06 00	7A F4	01 00	B3 20	00 00
		COMPUTER2	BE EF	03	06 00	BA F6	01 00	B3 20	04 00
		OFF	BE EF	03	06 00	8A B5	01 00	B3 20	FF 00
	Get		BE EF	03	06 00	49 F4	02 00	B3 20	00 00
MONITOR OUT - LAN	Set	COMPUTER1	BE EF	03	06 00	1A F6	01 00	BB 20	00 00
		COMPUTER2	BE EF	03	06 00	DA F4	01 00	BB 20	04 00
		OFF	BE EF	03	06 00	EA B7	01 00	BB 20	FF 00
	Get		BE EF	03	06 00	29 F6	02 00	BB 20	00 00
MONITOR OUT- USB TYPE A	Set	COMPUTER1	BE EF	03	06 00	B6 F4	01 00	B6 20	00 00
		COMPUTER2	BE EF	03	06 00	76 F6	01 00	B6 20	04 00
		OFF	BE EF	03	06 00	46 B5	01 00	B6 20	FF 00
	Get		BE EF	03	06 00	85 F4	02 00	B6 20	00 00
MONITOR OUT - USB TYPE B	Set	COMPUTER1	BE EF	03	06 00	6E F7	01 00	BC 20	00 00
		COMPUTER2	BE EF	03	06 00	AE F5	01 00	BC 20	0 4 00
		OFF	BE EF	03	06 00	9E B6	01 00	BC 20	FF 00
	Get		BE EF	03	06 00	5D F7	02 00	BC 20	00 00
MONITOR OUT - STANDBY	Set	COMPUTER IN1	BE EF	03	06 00	2A F7	01 00	BF 20	00 00
		COMPUTER IN2	BE EF	03	06 00	EA F5	01 00	BF 20	04 00
		OFF	BE EF	03	06 00	DA B6	01 00	BF 20	FF 00
	Get		BE EF	03	06 00	19 F7	02 00	BF 20	00 00
VOLUME - COMPUTER IN1	Get		BE EF	03	06 00	CD CC	02 00	60 20	00 00
	Increment		BE EF	03	06 00	AB CC	04 00	60 20	00 00
	Decrement		BE EF	03	06 00	7A CD	05 00	60 20	00 00
VOLUME - COMPUTER IN2	Get		BE EF	03	06 00	FD CD	02 00	64 20	00 00
	Increment		BE EF	03	06 00	9B CD	04 00	64 20	00 00
	Decrement		BE EF	03	06 00	4A CC	05 00	64 20	00 00
VOLUME - COMPONENT	Get		BE EF	03	06 00	01 CC	02 00	65 20	00 00
	Increment		BE EF	03	06 00	67 CC	04 00	65 20	00 00
	Decrement		BE EF	03	06 00	B6 CD	05 00	65 20	00 00
VOLUME - S-VIDEO	Get		BE EF	03	06 00	75 CD	02 00	62 20	00 00
	Increment		BE EF	03	06 00	13 CD	04 00	62 20	00 00
	Decrement		BE EF	03	06 00	C2 CC	05 00	62 20	00 00

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Names	Operation Type		Header				Command Data		
						CRC	Action	Type	Setting code
VOLUME - VIDEO	Get		BE EF	03	06 00	31 CD	02 00	61 20	00 00
	Increment		BE EF	03	06 00	57 CD	04 00	61 20	00 00
	Decrement		BE EF	03	06 00	86 CC	05 00	61 20	00 00
VOLUME - HDMI	Get		BE EF	03	06 00	89 CC	02 00	63 20	00 00
	Increment		BE EF	03	06 00	EF CC	04 00	63 20	00 00
	Decrement		BE EF	03	06 00	3E CD	05 00	63 20	00 00
VOLUME - LAN	Get		BE EF	03	06 00	E9 CE	02 00	6B 20	00 00
	Increment		BE EF	03	06 00	8F CE	04 00	6B 20	00 00
	Decrement		BE EF	03	06 00	5E CF	05 00	6B 20	00 00
VOLUME - USB TYPE A	Get		BE EF	03	06 00	45 CC	02 00	66 20	00 00
	Increment		BE EF	03	06 00	23 CC	04 00	66 20	00 00
	Decrement		BE EF	03	06 00	F2 CD	05 00	66 20	00 00
VOLUME - USB TYPE B	Get		BE EF	03	06 00	9D CF	02 00	6C 20	00 00
	Increment		BE EF	03	06 00	FB CF	04 00	6C 20	00 00
	Decrement		BE EF	03	06 00	2A CE	05 00	6C 20	00 00
VOLUME - STANDBY	Get		BE EF	03	06 00	D9 CF	02 00	6F 20	00 00
	Increment		BE EF	03	06 00	BF CF	04 00	6F 20	00 00
	Decrement		BE EF	03	06 00	6E CE	05 00	6F 20	00 00
MUTE	Set	OFF	BE EF	03	06 00	46 D3	01 00	02 20	00 00
		ON	BE EF	03	06 00	D6 D2	01 00	02 20	01 00
	Get		BE EF	03	06 00	75 D3	02 00	02 20	00 00
SPEAKER	Set	ON	BE EF	03	06 00	FE D4	01 00	1C 20	01 00
		OFF	BE EF	03	06 00	6E D5	01 00	1C 20	00 00
	Get		BE EF	03	06 00	5D D5	02 00	1C 20	00 00
AUDIO SOURCE - COMPUTER IN1	Set	AUDIO IN1	BE EF	03	06 00	6E DC	01 00	30 20	01 00
		AUDIO IN2	BE EF	03	06 00	9E DC	01 00	30 20	02 00
		AUDIO IN3	BE EF	03	06 00	0E DD	01 00	30 20	03 00
		OFF	BE EF	03	06 00	FE DD	01 00	30 20	00 00
	Get		BE EF	03	06 00	CD DD	02 00	30 20	00 00
AUDIO SOURCE - COMPUTER IN2	Set	AUDIO IN1	BE EF	03	06 00	5E DD	01 00	34 20	01 00
		AUDIO IN2	BE EF	03	06 00	AE DD	01 00	34 20	02 00
		AUDIO IN3	BE EF	03	06 00	3E DC	01 00	34 20	03 00
		OFF	BE EF	03	06 00	CE DC	01 00	34 20	00 00
	Get		BE EF	03	06 00	FD DC	02 00	34 20	00 00
AUDIO SOURCE LAN	Set	OFF	BE EF	03	06 00	DA DF	01 00	3B 20	00 00
		AUDIO1	BE EF	03	06 00	4A DE	01 00	3B 20	01 00
		AUDIO2	BE EF	03	06 00	BA DE	01 00	3B 20	02 00
		AUDIO3	BE EF	03	06 00	2A DF	01 00	3B 20	03 00
	Get		BE EF	03	06 00	E9 DF	02 00	3B 20	00 00
AUDIO SOURCE - USB TYPE A	Set	OFF	BE EF	03	06 00	76 DD	01 00	36 20	00 00
		AUDIO1	BE EF	03	06 00	E6 DC	01 00	36 20	01 00
		AUDIO2	BE EF	03	06 00	16 DC	01 00	36 20	02 00
		AUDIO3	BE EF	03	06 00	86 DD	01 00	36 20	03 00
	Get		BE EF	03	06 00	45 DD	02 00	36 20	00 00
AUDIO SOURCE USB TYPE B	Set	OFF	BE EF	03	06 00	AE DE	01 00	3C 20	00 00
		AUDIO1	BE EF	03	06 00	3E DF	01 00	3C 20	01 00
		AUDIO2	BE EF	03	06 00	CE DF	01 00	3C 20	02 00
		AUDIO3	BE EF	03	06 00	5E DE	01 00	3C 20	03 00
	Get		BE EF	03	06 00	9D DE	02 00	3C 20	00 00

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Names	Operation Type		Header				Command Data		
						CRC	Action	Type	Setting code
AUDIO SOURCE - HDMI	Set	OFF	BE EF	03	06 00	BA DD	01 00	33 20	00 00
		AUDIO1	BE EF	03	06 00	2A DC	01 00	33 20	01 00
		AUDIO2	BE EF	03	06 00	DA DC	01 00	33 20	02 00
		AUDIO3	BE EF	03	06 00	4A DD	01 00	33 20	03 00
		AUDIO_HDMI	BE EF	03	06 00	7A C4	01 00	33 20	20 00
	Get		BE EF	03	06 00	89 DD	02 00	33 20	00 00
AUDIO SOURCE - COMPONENT	Set	AUDIO IN1	BE EF	03	06 00	A2 DC	01 00	35 20	01 00
		AUDIO IN2	BE EF	03	06 00	52 DC	01 00	35 20	02 00
		AUDIO IN3	BE EF	03	06 00	C2 DD	01 00	35 20	03 00
		OFF	BE EF	03	06 00	32 DD	01 00	35 20	00 00
	Get		BE EF	03	06 00	01 DD	02 00	35 20	00 00
AUDIO SOURCE - S-VIDEO	Set	AUDIO IN1	BE EF	03	06 00	D6 DD	01 00	32 20	01 00
		AUDIO IN2	BE EF	03	06 00	26 DD	01 00	32 20	02 00
		AUDIO IN3	BE EF	03	06 00	B6 DC	01 00	32 20	03 00
		OFF	BE EF	03	06 00	46 DC	01 00	32 20	00 00
	Get		BE EF	03	06 00	75 DC	02 00	32 20	00 00
AUDIO SOURCE - VIDEO	Set	AUDIO IN1	BE EF	03	06 00	92 DD	01 00	31 20	01 00
		AUDIO IN2	BE EF	03	06 00	62 DD	01 00	31 20	02 00
		AUDIO IN3	BE EF	03	06 00	F2 DC	01 00	31 20	03 00
		OFF	BE EF	03	06 00	02 DC	01 00	31 20	00 00
	Get		BE EF	03	06 00	31 DC	02 00	31 20	00 00
AUDIO SOURCE STANDBY	Set	AUDIO IN1	BE EF	03	06 00	7A DF	01 00	3F 20	01 00
		AUDIO IN2	BE EF	03	06 00	8A DF	01 00	3F 20	02 00
		AUDIO IN3	BE EF	03	06 00	1A DE	01 00	3F 20	03 00
		OFF	BE EF	03	06 00	EA DE	01 00	3F 20	00 00
	Get		BE EF	03	06 00	D9 DE	02 00	3F 20	00 00
HDMI AUDIO	Set	1	BE EF	03	06 00	AE C6	01 00	40 20	01 00
		2	BE EF	03	06 00	5E C6	01 00	40 20	02 00
	Get		BE EF	03	06 00	0D C7	02 00	40 20	00 00
MIC LEVEL	Set	LOW	BE EF	03	06 00	02 F1	01 00	A1 20	00 00
		HIGH	BE EF	03	06 00	92 F0	01 00	A1 20	01 00
	Get		BE EF	03	06 00	31 F1	02 00	A1 20	00 00
MIC VOLUME	Get		BE EF	03	06 00	75 F1	02 00	A2 20	00 00
	Increment		BE EF	03	06 00	13 F1	04 00	A2 20	00 00
	Decrement		BE EF	03	06 00	C2 F0	05 00	A2 20	00 00
LANGUAGE	Set	ENGLISH	BE EF	03	06 00	F7 D3	01 00	05 30	00 00
		FRANÇAIS	BE EF	03	06 00	67 D2	01 00	05 30	01 00
		DEUTSCH	BE EF	03	06 00	97 D2	01 00	05 30	02 00
		ESPAÑOL	BE EF	03	06 00	07 D3	01 00	05 30	03 00
		ITALIANO	BE EF	03	06 00	37 D1	01 00	05 30	04 00
		NORSK	BE EF	03	06 00	A7 D0	01 00	05 30	05 00
		NEDERLANDS	BE EF	03	06 00	57 D0	01 00	05 30	06 00
		PORTUGUÊS	BE EF	03	06 00	C7 D1	01 00	05 30	07 00
		日本語	BE EF	03	06 00	37 D4	01 00	05 30	08 00
		简体中文	BE EF	03	06 00	A7 D5	01 00	05 30	09 00
		繁體中文	BE EF	03	06 00	37 DE	01 00	05 30	10 00
		한글	BE EF	03	06 00	57 D5	01 00	05 30	0A 00
		SVENSKA	BE EF	03	06 00	C7 D4	01 00	05 30	0B 00
		РУССКИЙ	BE EF	03	06 00	F7 D6	01 00	05 30	0C 00
		SUOMI	BE EF	03	06 00	67 D7	01 00	05 30	0D 00
	NOTE) Not all of the languages in this table are supported.								

(continued on next page)

Names	Operation Type		Header				Command Data		
						CRC	Action	Type	Setting code
LANGUAGE	Set	POLSKI	BE EF	03	06 00	97 D7	01 00	05 30	0E 00
		TÜRKÇE	BE EF	03	06 00	07 D6	01 00	05 30	0F 00
		DANSK	BE EF	03	06 00	A7 DF	01 00	05 30	11 00
		ČESKY	BE EF	03	06 00	57 DF	01 00	05 30	12 00
		MAGYAR	BE EF	03	06 00	C7 DE	01 00	05 30	13 00
		ROMÂNĂ	BE EF	03	06 00	F7 DC	01 00	05 30	14 00
		SLOVENSKI	BE EF	03	06 00	67 DD	01 00	05 30	15 00
		HRVATSKI	BE EF	03	06 00	97 DD	01 00	05 30	16 00
		ΕΛΛΗΝΙΚΑ	BE EF	03	06 00	07 DC	01 00	05 30	17 00
		LIETUVIŲ	BE EF	03	06 00	F7 D9	01 00	05 30	18 00
		EESTI	BE EF	03	06 00	67 D8	01 00	05 30	19 00
		LATVIEŠU	BE EF	03	06 00	97 D8	01 00	05 30	1A 00
		ไทย	BE EF	03	06 00	07 D9	01 00	05 30	1B 00
		اللغة العربية	BE EF	03	06 00	37 DB	01 00	05 30	1C 00
		فارسی	BE EF	03	06 00	A7 DA	01 00	05 30	1D 00
		PORTUGUÊS BRA	BE EF	03	06 00	57 DA	01 00	05 30	1E 00
	Get		BE EF	03	06 00	C4 D3	02 00	05 30	00 00
	NOTE) Not all of the languages in this table are supported.								
MENU POSITION H	Get		BE EF	03	06 00	04 D7	02 00	15 30	00 00
	Increment		BE EF	03	06 00	62 D7	04 00	15 30	00 00
	Decrement		BE EF	03	06 00	B3 D6	05 00	15 30	00 00
MENU POSITION H Reset	Execute		BE EF	03	06 00	DC C6	06 00	43 70	00 00
MENU POSITION V	Get		BE EF	03	06 00	40 D7	02 00	16 30	00 00
	Increment		BE EF	03	06 00	26 D7	04 00	16 30	00 00
	Decrement		BE EF	03	06 00	F7 D6	05 00	16 30	00 00
MENU POSITION V Reset	Execute		BE EF	03	06 00	A8 C7	06 00	44 70	00 00
BLANK	Set	MyScreen	BE EF	03	06 00	FB CA	01 00	00 30	20 00
		ORIGINAL	BE EF	03	06 00	FB E2	01 00	00 30	40 00
		BLUE	BE EF	03	06 00	CB D3	01 00	00 30	03 00
		WHITE	BE EF	03	06 00	6B D0	01 00	00 30	05 00
		BLACK	BE EF	03	06 00	9B D0	01 00	00 30	06 00
	Get		BE EF	03	06 00	08 D3	02 00	00 30	00 00
BLANK On/Off	Set	OFF	BE EF	03	06 00	FB D8	01 00	20 30	00 00
		ON	BE EF	03	06 00	6B D9	01 00	20 30	01 00
	Get		BE EF	03	06 00	C8 D8	02 00	20 30	00 00
START UP	Set	MyScreen	BE EF	03	06 00	CB CB	01 00	04 30	20 00
		ORIGINAL	BE EF	03	06 00	0B D2	01 00	04 30	00 00
		OFF	BE EF	03	06 00	9B D3	01 00	04 30	01 00
	Get		BE EF	03	06 00	38 D2	02 00	04 30	00 00
MyScreen Lock	Set	OFF	BE EF	03	06 00	3B EF	01 00	C0 30	00 00
		ON	BE EF	03	06 00	AB EE	01 00	C0 30	01 00
	Get		BE EF	03	06 00	08 EF	02 00	C0 30	00 00
MESSAGE	Set	OFF	BE EF	03	06 00	8F D6	01 00	17 30	00 00
		ON	BE EF	03	06 00	1F D7	01 00	17 30	01 00
	Get		BE EF	03	06 00	BC D6	02 00	17 30	00 00

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RS-232C Communication / Network command table (continued)

Names	Operation Type		Header				Command Data		
						CRC	Action	Type	Setting code
TEMPLATE	Set	TEST PATTERN	BE EF	03	06 00	43 D9	01 00	22 30	00 00
		DOT-LINE1	BE EF	03	06 00	D3 D8	01 00	22 30	01 00
		DOT-LINE2	BE EF	03	06 00	23 D8	01 00	22 30	02 00
		DOT-LINE3	BE EF	03	06 00	B3 D9	01 00	22 30	03 00
		DOT-LINE4	BE EF	03	06 00	83 DB	01 00	22 30	04 00
		CIRCLE 1	BE EF	03	06 00	13 DA	01 00	22 30	05 00
		CIRCLE 2	BE EF	03	06 00	E3 DA	01 00	22 30	06 00
		MAP 1	BE EF	03	06 00	83 D4	01 00	22 30	10 00
		MAP 2	BE EF	03	06 00	13 D5	01 00	22 30	11 00
		STACK	BE EF	03	06 00	83 C0	01 00	22 30	20 00
	Get		BE EF	03	06 00	70 D9	02 00	22 30	00 00
TEMPLATE On/ Off	Set	OFF	BE EF	03	06 00	BF D8	01 00	23 30	00 00
		ON	BE EF	03	06 00	2F D9	01 00	23 30	01 00
	Get		BE EF	03	06 00	8C D8	02 00	23 30	00 00
C. C. - DISPLAY	Set	OFF	BE EF	03	06 00	FA 62	01 00	00 37	00 00
		ON	BE EF	03	06 00	6A 63	01 00	00 37	01 00
		AUTO	BE EF	03	06 00	9A 63	01 00	00 37	02 00
	Get		BE EF	03	06 00	C9 62	02 00	00 37	00 00
C. C. - MODE	Set	CAPTIONS	BE EF	03	06 00	06 63	01 00	01 37	00 00
		TEXT	BE EF	03	06 00	96 62	01 00	01 37	01 00
	Get		BE EF	03	06 00	35 63	02 00	01 37	00 00
C. C. - CHANNEL	Set	1	BE EF	03	06 00	D2 62	01 00	02 37	01 00
		2	BE EF	03	06 00	22 62	01 00	02 37	02 00
		3	BE EF	03	06 00	B2 63	01 00	02 37	03 00
		4	BE EF	03	06 00	82 61	01 00	02 37	04 00
	Get		BE EF	03	06 00	71 63	02 00	02 37	00 00
AUTO SEARCH	Set	OFF	BE EF	03	06 00	B6 D6	01 00	16 20	00 00
		ON	BE EF	03	06 00	26 D7	01 00	16 20	01 00
	Get		BE EF	03	06 00	85 D6	02 00	16 20	00 00
AUTO KEYSTONE	Set	OFF	BE EF	03	06 00	EA D1	01 00	0F 20	00 00
		ON	BE EF	03	06 00	7A D0	01 00	0F 20	01 00
	Get		BE EF	03	06 00	D9 D1	02 00	0F 20	00 00
DIRECT POWER ON	Set	OFF	BE EF	03	06 00	3B 89	01 00	20 31	00 00
		ON	BE EF	03	06 00	AB 88	01 00	20 31	01 00
	Get		BE EF	03	06 00	08 89	02 00	20 31	00 00
AUTO POWER OFF	Get		BE EF	03	06 00	08 86	02 00	10 31	00 00
	Increment		BE EF	03	06 00	6E 86	04 00	10 31	00 00
	Decrement		BE EF	03	06 00	BF 87	05 00	10 31	00 00
USB TYPE B	Set	MOUSE	BE EF	03	06 00	FF 23	01 00	50 26	00 00
		USB DISPLAY	BE EF	03	06 00	6F 22	01 00	50 26	01 00
	Get		BE EF	03	06 00	CC 23	02 00	50 26	00 00
LAMP TIME	Get		BE EF	03	06 00	C2 FF	02 00	90 10	00 00
LAMP TIME Reset	Execute		BE EF	03	06 00	58 DC	06 00	30 70	00 00
FILTER TIME	Get		BE EF	03	06 00	C2 F0	02 00	A0 10	00 00
FILTER TIME Reset	Execute		BE EF	03	06 00	98 C6	06 00	40 70	00 00

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Names	Operation Type		Header				Command Data		
						CRC	Action	Type	Setting code
MY BUTTON-1	Set	COMPUTER IN1	BE EF	03	06 00	3A 33	01 00	00 36	00 00
		COMPUTER IN2	BE EF	03	06 00	FA 31	01 00	00 36	04 00
		LAN	BE EF	03	06 00	0A 34	01 00	00 36	0B 00
		USB TYPE A	BE EF	03	06 00	9A 30	01 00	00 36	06 00
		USB TYPE B	BE EF	03	06 00	3A 36	01 00	00 36	0C 00
		HDMI	BE EF	03	06 00	CA 33	01 00	00 36	03 00
		COMPONENT	BE EF	03	06 00	6A 30	01 00	00 36	05 00
		S-VIDEO	BE EF	03	06 00	5A 32	01 00	00 36	02 00
		VIDEO	BE EF	03	06 00	AA 32	01 00	00 36	01 00
		SLIDESHOW	BE EF	03	06 00	9A 2B	01 00	00 36	22 00
		MY IMAGE	BE EF	03	06 00	5A 3D	01 00	00 36	16 00
		MESSENGER	BE EF	03	06 00	AA 29	01 00	00 36	25 00
		INFORMATION	BE EF	03	06 00	FA 3E	01 00	00 36	10 00
		AUTO KEYSTONE V	BE EF	03	06 00	6A 3F	01 00	00 36	11 00
		MY MEMORY	BE EF	03	06 00	9A 3F	01 00	00 36	12 00
		ACTIVE IRIS	BE EF	03	06 00	AA 3D	01 00	00 36	15 00
		PICTURE MODE	BE EF	03	06 00	0A 3E	01 00	00 36	13 00
		FILTER RESET	BE EF	03	06 00	3A 3C	01 00	00 36	14 00
		AV MUTE	BE EF	03	06 00	AA 38	01 00	00 36	19 00
		TEMPLATE	BE EF	03	06 00	CA 39	01 00	00 36	1B 00
		RESOLUTION	BE EF	03	06 00	9A 3A	01 00	00 36	1E 00
		MIC VOLUME	BE EF	03	06 00	9A 24	01 00	00 36	36 00
		ECO MODE	BE EF	03	06 00	0A 25	01 00	00 36	37 00
	Get		BE EF	03	06 00	09 33	02 00	00 36	00 00
MY BUTTON-2	Set	COMPUTER IN1	BE EF	03	06 00	C6 32	01 00	01 36	00 00
		COMPUTER IN2	BE EF	03	06 00	06 30	01 00	01 36	04 00
		LAN	BE EF	03	06 00	F6 35	01 00	01 36	0B 00
		USB TYPE A	BE EF	03	06 00	66 31	01 00	01 36	06 00
		USB TYPE B	BE EF	03	06 00	C6 37	01 00	01 36	0C 00
		HDMI	BE EF	03	06 00	36 32	01 00	01 36	03 00
		COMPONENT	BE EF	03	06 00	96 31	01 00	01 36	05 00
		S-VIDEO	BE EF	03	06 00	A6 33	01 00	01 36	02 00
		VIDEO	BE EF	03	06 00	56 33	01 00	01 36	01 00
		SLIDESHOW	BE EF	03	06 00	66 2A	01 00	01 36	22 00
		MY IMAGE,	BE EF	03	06 00	A6 3C	01 00	01 36	16 00
		MESSENGER	BE EF	03	06 00	56 28	01 00	01 36	25 00
		INFORMATION	BE EF	03	06 00	06 3F	01 00	01 36	10 00
		AUTO KEYSTONE V	BE EF	03	06 00	96 3E	01 00	01 36	11 00
		MY MEMORY	BE EF	03	06 00	66 3E	01 00	01 36	12 00
		ACTIVE IRIS	BE EF	03	06 00	56 3C	01 00	01 36	15 00
		PICTURE MODE	BE EF	03	06 00	F6 3F	01 00	01 36	13 00
		FILTER RESET	BE EF	03	06 00	C6 3D	01 00	01 36	14 00
		AV MUTE	BE EF	03	06 00	56 39	01 00	01 36	19 00
		TEMPLATE	BE EF	03	06 00	36 38	01 00	01 36	1B 00
		RESOLUTION	BE EF	03	06 00	66 3B	01 00	01 36	1E 00
		MIC VOLUME	BE EF	03	06 00	66 25	01 00	01 36	36 00
		ECO MODE	BE EF	03	06 00	F6 24	01 00	01 36	37 00
	Get		BE EF	03	06 00	F5 32	02 00	01 36	00 00

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RS-232C Communication / Network command table (continued)

Names	Operation Type		Header				Command Data		
						CRC	Action	Type	Setting code
MY SOURCE	Set	COMPUTER IN1	BE EF	03	06 00	FA 38	01 00	20 36	00 00
		COMPUTER IN2	BE EF	03	06 00	3A 3A	01 00	20 36	04 00
		LAN	BE EF	03	06 00	CA 3F	01 00	20 36	0B 00
		USB TYPE A	BE EF	03	06 00	5A 3B	01 00	20 36	06 00
		USB TYPE B	BE EF	03	06 00	FA 3D	01 00	20 36	0C 00
		HDMI	BE EF	03	06 00	0A 38	01 00	20 36	03 00
		COMPONENT	BE EF	03	06 00	AA 3B	01 00	20 36	05 00
		S-VIDEO	BE EF	03	06 00	9A 39	01 00	20 36	02 00
		VIDEO	BE EF	03	06 00	6A 39	01 00	20 36	01 00
	Get		BE EF	03	06 00	C9 38	02 00	20 36	00 00
Magnify Position H	Get		BE EF	03	06 00	C8 D7	02 00	10 30	00 00
	Increment		BE EF	03	06 00	AE D7	04 00	10 30	00 00
	Decrement		BE EF	03	06 00	7F D6	05 00	10 30	00 00
Magnify Position V	Get		BE EF	03	06 00	34 D6	02 00	11 30	00 00
	Increment		BE EF	03	06 00	52 D6	04 00	11 30	00 00
	Decrement		BE EF	03	06 00	83 D7	05 00	11 30	00 00
REMOTE FREQ. NORMAL	Set	OFF	BE EF	03	06 00	FF 3D	01 00	30 26	00 00
		ON	BE EF	03	06 00	6F 3C	01 00	30 26	01 00
	Get		BE EF	03	06 00	CC 3D	02 00	30 26	00 00
REMOTE FREQ. HIGH	Set	OFF	BE EF	03	06 00	03 3C	01 00	31 26	00 00
		ON	BE EF	03	06 00	93 3D	01 00	31 26	01 00
	Get		BE EF	03	06 00	30 3C	02 00	31 26	00 00
MY IMAGE	Set	OFF	BE EF	03	06 00	3A C3	01 00	00 35	00 00
		IMAGE-1	BE EF	03	06 00	AA C2	01 00	00 35	01 00
		IMAGE-2	BE EF	03	06 00	5A C2	01 00	00 35	02 00
		IMAGE-3	BE EF	03	06 00	CA C3	01 00	00 35	03 00
		IMAGE-4	BE EF	03	06 00	FA C1	01 00	00 35	04 00
	Get		BE EF	03	06 00	09 C3	02 00	00 35	00 00
MY IMAGE IMAGE-1 Delete	Execute		BE EF	03	06 00	71 C3	06 00	01 35	00 00
MY IMAGE IMAGE-2 Delete	Execute		BE EF	03	06 00	35 C3	06 00	02 35	00 00
MY IMAGE IMAGE-3 Delete	Execute		BE EF	03	06 00	C9 C2	06 00	03 35	00 00
MY IMAGE IMAGE-4 Delete	Execute		BE EF	03	06 00	BD C3	06 00	04 35	00 00

PJLink command

Commands	Control Description	Parameter or Response
POWR	Power Contorol	0 = Standby
		1 = Power On
POWR ?	Power Status inquiry	0 = Standby
		1 = Power On
		2 = Cool Down
INPT	Input Source selection	11 = COMPUTER IN 1
		12 = COMPUTER IN 2
		21 = COMPONENT
		22 = S-VIDEO
		23 = VIDEO
		31 = HDMI
		41 = USB TYPE A
		51 = LAN
		52 = USB TYPE B
INPT ?	Input Source inquiry	11 = COMPUTER IN 1
		12 = COMPUTER IN 2
		21 = COMPONENT
		22 = S-VIDEO
		23 = VIDEO
		31 = HDMI
		41 = USB TYPE A
		51 = LAN
		52 = USB TYPE B
AVMT	AV Mute	10 = BLANK off
		11 = BLANK on
		20 = Mute off
		21 = Mute on
		30 = AV Mute off
		31 = AV Mute on
AVMT ?	AV Mute inquiry	10 = BLANK off
		11 = BLANK on
		20 = Mute off
		21 = Mute on
		30 = AV Mute off
		31 = AV Mute on

(continued on next page)

PJLink command (continued)

Commands	Control Description	Parameter or Response
ERST ?	Error Status inquiry	1st byte: Refers to Fan error; one of 0 to 2
		2nd byte: Refers to Lamp error; one of 0 to 2
		3rd byte: Refers to Temptrature error; one of 0 to 2
		4th byte: Refers to Cover error; one of 0 to 2
		5th byte: Refers to Filter error; one of 0 to 2
		6th byte: Refers to Other error; one of 0 to 2
		The mearning of 0 to 2 is as given below
		0 = Error is not detected; 1 = Warning; 2 = Error
LAMP ?	Lamp Status inquiry	1st number (digits 1 to 5): Lamp Time
		2nd number : 0 = Lamp off, 1 = Lamp on
INST ?	Input Source List inquiry	11 12 21 22 23 31 41 51 52
NAME ?	Projector Name inquiry	Responds with the name set in "PROJECTOR NAME" of "NETWORK"
INF1 ?	Manufucturer's Name inquiry	HITACHI
INF2 ?	Model Name inquiry	Your model name, "CP-X4021N", "CP-X5021N" or "CP-WX4021N".
INFO ?	Other Information inquiry	Responds with the factory information and so on
CLSS ?	Class Information inquiry	1

NOTE • The password used in PJLink™ is the same as the password set in the Web Browser Control. To use PJLink™ without authentication, do not set any password in Web Browser Control.

• For specifications of PJLink™, see the web site of the Japan Business Machine and Information System Industries Association.
URL: http://pjlink.jbmia.or.jp/

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URL: http://av.hitachi.com/projector/index.html

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Indirizzo pagina web: http://av.hitachi.com/projector/index.html

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Se den følgende websiden for lisensavtaler for slike programvaremoduler og annen programvare.

Webadresse: http://av.hitachi.com/projector/index.html

Kontakt din forhandler for innspill angående lisensiert programvare. Se lisensavtalene for hver programvare i de følgende sidene (📖*15 -*) og lisensavtalene for hver programvare på websiden for detaljer om lisensforholdene og så videre. (Ettersom de følgende lisensavtalene er etablert av en tredjepart er de oppgitt på originalspråket engelsk).

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Raadpleeg de volgende webpagina voor de gebruiksrechtovereenkomsten betreffende zulke softwaremodules en andere software.

Webpagina: http://av.hitachi.com/projector/index.html

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网页地址 ：http://av.hitachi.com/projector/index.html

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웹 페이지 주소 : http://av.hitachi.com/projector/index.html

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Webbsida: http://av.hitachi.com/projector/index.html

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